COTTON PAINTING AND PRINTING.

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COTTON PAINTING AND PRINTING

IN THE

MADRAS PRESIDENCY

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BY

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INTRODUCTION.

IN accordance with the Proceedings of the Director of Public Instruction No. 6703 of 1913, dated 3rd January 1914, I have compiled this account of cotton painting and printing in the Madras Presidency.

This is the second of the series of "pattern books" for Indian craftsmen, of which the first was the book on brass and copper work, published in 1913.

The idea of preserving the best of the old patterns in use by various Indian artisans in a permanent form, which is the object of this series of publications, could doubtless be brought about merely by a collection of drawings or photographs, but in the case of cotton paintings and prints I have thought that some account of the industry, other than a collection of photographic reproductions, would be both interesting and desirable.

There are many reasons for this. Unlike metal work or wood work, the productions are not very permanent ; they are subject to comparatively rapid wear when in use, and, except for a very few specimens preserved in museums, there are almost no examples of old ones now to be found.

Again, the processes employed have never been satisfactorily described in English. Various writers have described the processes but in an inaccurate or perfunctory way, which is worse than useless for practical purposes.

The order of the application of the dyes which is a very important consideration, the use of wax as a "resist" and other details have been described in various Government publications in such a confused and unintelligent way that it is next to impossible to separate the truth.

While the present publications are intended mainly to be a guide to good patterns for actual workmen, and so do not require any technical description of the processes employed, they also may form something of a library of Indian artistic work, and as such, when a very interesting and unusual process of manufacture is concerned, it seems to me most desirable that the method by which the result is obtained should be known.

The industry is rapidly declining, except perhaps at Masulipatam, for want of encouragement, and that is still another reason for preserving an account of it.

I take this opportunity of thanking Mr. Krishnaswami Pillai, one of the masters in the School of Arts, who has been most helpful to me with the account of the process as used in the school.

To the cotton painter P. Govinda Nayakar, still working here, I also wish to extend my best thanks for his care in every operation and his kindness in explaining the reasons for each step of the processes involved, so minutely.

Both Govinda Nayakar and his brother workman P. Kuppu Nayakar, both from Ponneri, have my respect for preserving the old methods of working, so infinitely superior to the modern ones. If their art now offers very little in the way of pecuniary gain, they at least have the satisfaction of knowing that, when others have ruined and debased this beautiful work by the employment of synthetic dyes, they alone, at least in the immediate vicinity of Madras, have been faithful to their inheritance.

I have also to thank Colonel A. R. Nethersole for translating the inscriptions on some Masulipatam cloths for me, and Dr. J. R. Henderson of the Government Museum for permission to photograph many of the examples shown, and for his invariable kindness in allowing me every facility for study of the treasures in his charge.

SCHOOL OF ARTS, MADRAS,
August 1915.

W. S. H.

COTTON PAINTING AND PRINTING IN THE MADRAS PRESIDENCY.

THE origin of the first painted cottons was most probably to produce a hanging or banner in the nature of a picture.

It is unlikely that the first examples were in any way copies of woven cloths, though in later times they undoubtedly became, in many examples, very close copies of woven materials.

The earliest examples of painted cloths, which have yet been found, are the Egyptian cloths of the late XVIII Dynasty (approximately 1594 B.C.) found at Devi-El-Bahari in the neighbourhood of Thebes.

These were small cloths, the largest measuring 15″ × 18″ and finished at the top with loops, as though intended for hanging on a wall or shrine, or perhaps to be used as a banner. The subjects were the goddess Hathor being adored.

Red and blue colours predominate, and the vehicle used was, apparently, wax.

These cloths were, in fact, painted in much the same way that one might paint nowadays on canvas, except that instead of a stiff, more or less flat and firm surface, the medium allowed of a considerable amount of flexibility. They could be crumpled up to some extent without the colour flaking off, as would happen with an oil colour picture on canvas.

Unlike a stained or dyed cloth they were not completely flexible, and they were non-washable.

The next hand-painted cloths are also Egyptian, but of the first century.

The Egyptian cloths can hardly be said to be the prototype of the Indian ones, but the mention of them is made merely to show that the process of painting on a flexible cloth is of very great antiquity.

Pliny ("Nat. Hist.," XXV, 42) tells us that the art of colouring white cloth in various permanent colours, and in many patterns, was practised in Egypt in his time, and his detailed description of the process applies in almost every particular to the "resist," and other methods of dyeing, which are still followed in many parts of India today.

Among Indian records, the earliest notice of patterned cottons which it has been possible to find is that in the Ain-i-Akbari, of about 1590, where there is a mention of "Chint," "Chint" being used in this instance as the singular of "Chintz," though later "Chintzes" was the plural form.

After the beginning of the seventeenth century there are scores of references in books dealing with Indian subjects to a great variety of painted or printed cottons.

It is most difficult, now, to identify the various old names for the tremendous variety of cotton cloths which were exported from India in the seventeenth and eighteenth centuries.

No less than 125 sorts of cottons are mentioned in "Hobson-Jobson" and the mixture of names in the records of the "English Factories in India" is also at times most confusing.

A few terms, however, can be identified with some degree of accuracy.

"Chintz" and its variations, "chites," "chint," "cheentes," "chidneys," "chinte," "scrittores"; "pintado" which was used sometimes to describe a chintz, often as a term for any dyed or painted cotton; and "salampores," also used to describe certain sorts of chintz.

The term "chintz" which looms so large in old records originally referred to the nature of the pattern and had apparently nothing to do with the finish of the cloth.

The present use of the word is to describe a highly glazed printed calico without reference to its pattern, while the word as originally used meant a dotted or spotted pattern in which the units did not connect.

Used in this original connexion, there is a reference as late as 1866–67 to an old man at Sadras who then made chintzes, and among the prints from the old wood blocks figures 54-A and B are obviously intended for chintz-making.

To return to early references to decorated cottons, the Company's records provide a great variety of references, many of which tend to show that even in the old days it was not always easy to procure these desirable commodities as easily as the factors desired.

In the records of 1634–36 an interesting account is given of a white woollen cloth which was sent to India to be dyed, by His Majesty King Charles I.

The original cloth having been lost, the factor suggests another, to be "Stayned after the manner of the fine paintings of Mesulipitam."

The same volume of records, in a reference to a certain voyage of the ship *Coaster*, mentions : "Her return lading of Calico is to be one-fourth in paintings."

The 1637–41 records refer in one place to the sale at home of "quilts of chintz, being novelties, produced from £5-5*s*. to £6 the pair," surely an excellent price at any time.

References are found (1635–36) suggesting the removal of the Company's Factory from Masulipatam to Armagon (Gudur taluk, Nellore district), "where are plenty of paintings and alsoe white cloth procurable."

A rather obscure reference in this same volume seems to show that trade in cottons with Persia was carried on ; "Patterns sent of colours of paintings for the King of Persia," but the connexion is not clear.

That what is now Madras at one time produced printed cottons is very clear from several entries in the records.

August 27th, 1639, "the Nague of Vincatadra whose territories lyes between Pullacatt & Santomee, the only place for paintings, so much desired at Southwards" (meaning Bantam).

Trade with Bantam in "paintings" is mentioned in 1640 (1637–41). "You may acquire yearly very great quantities of long cloth for England and paintings and many other sortments of stuffs and clothing vendible at Bantam."

The descriptions in the Company's records are never sufficiently accurate to identify the sort of decorated cloth described, but one can form some sort of picture of the upholstery of old beds from an entry in the records of 1619. "Some, all of a kinde of chinte the lyninge and upper parte of one and the same, some of differente chintes, yet such as eather side may be used ; and some to have borders only of different cullers, about a covida (cubit) deepe, to hang by the bed side on all sides alike."

Evelyn (1665) saw in Lady Mordant's house at Ashtead "a roome hung with Pintado, full of figures greate and small, prettily representing sundry trades and occupations of the Indians, with their habits." Evidently these cloths were attempts to imitate tapestry and it would be interesting to compare them with the "Indian" tapestries of Elihu Yale which are still in existence, were this possible. Governor Yale in his "Memoriall" of December, 1681, writing from Edelemburoo, says : "I have with all deilligence encouraged the painting trade, and have been at some charge to doe itt, without any manner of partiallity. I think we farr out-doe Metchillipatam, and hope by next ship to send you a thousand pieces, such as never were seen in the world, if I can but keep these cursed fellowes from mixing southern chay with the northern, the latter being the best and costs much more."

The term "pintado" used by Evelyn is explained in Hobson-Jobson as from the Portuguese, meaning a painted or spotted cloth (i.e., chintz), but it was evidently a common term to describe almost any Indian decorated cotton. Bernier's (1663) most interesting reference to painted cottons is his description of the Emperor Shah Jehan's reception tent.

He says: "It was lined with those *chittis*, or cloths painted by a pencil of Masulipitam, purposely wrought and contrived with such vivid colours and flowers, so naturalty drawn, of a hundred several fashions and shapes, that one would have said it was a hanging parterre."

References by other travellers show differences of opinion as to where the best "paintings" were obtainable. Dr. Fryer (1672–81) writes of the fine dyed and painted stuffs of Petapouli (Nizamapatam) and Masulipatam; Streynsham Master in his "Memoriall," writing of his visit to the Dutch Factory at Policull (March 1679), says, after telling of the indigo dyeing of blue cloth:—"Also they (the Dutch Company) make many of their best paintings there;" and Melchizidec Thevenot, the French traveller (1687), tells us that "the cloths coloured at St. Thomé" were "much finer and of better colour than those of the other parts of the Indes."

The references to the difficulties attending the collection of cloths for export are numerous in the Company's records. A letter from Masulipatam to Bantam (1636) explains that "the painters which wrought those musters (of cloths) sent upon the *Speedwell* are by the Governors ill useage gon to some other place and cannot be traced, but it is hoped that the work may be done at Armagon."

(1640) "The *Prosperous* is daily expected from Madraspatam with more 'paintings'; but the weather is so bad that the washers are unable to 'cure' those already in hand."

(1640) "Our paintings proved rotten." (That is, probably, not properly cured.)

(1640) "goods (especially paintings) cannot be procured, nor secured when required, unlesse you have some place of your owne to protect the workmen from the frequent inforcements of those tyranous governors."

The spreading of the cloths in process of manufacture on the bed of a river to bleach and "cure" often led to their being washed away by unexpected floods.

Tavernier (1676) introduces us to a new term; "Chites or Printed Calicuts which they call *Calemander* that is done with a pencil are made in the kingdom of Golconda and particularly about Masulipatam."

Havart (1693) mentions the manufacture of chintz at Sadras and gives an account of the process employed.

From these somewhat scattered references, we see that almost all the old writers on India were considerably impressed with the importance of this industry of making decorated cottons.

So great a trade was established in cotton exports from India, that the iniquitous laws of 1700 were enacted in England to try to suppress the trade in favour of home manufactured goods.

Among the great variety of names by which painted cottons were known the modern name of "palampore" was seldom used by the old writers.

The first occurrence seems to be from Fryer (quoted in Hobson-Jobson), 1673. "Staple commodities (at Masulipatam) are Calicuts, white and painted, *palampores*, carpets."

A similar term which referred to a kind of chintz is also found in Hobson-Jobson, "salempores."

There has been much useless controversy over the origin of the term "palampore" discussed by various writers, but it is not a term in use among the makers of decorated cottons in India, except in referring to them to Europeans.

In the last serious enquiry into the industry in Madras, which was started by Mr. G. P. Rouffaer in 1899, the term "palampore" is reported as "not known" among the makers, except at Masulipatam, while the enquirer impresses us that "pamampore" is a corruption of "palangposh," the same contention which Mr. Havell had put forward some years previously.

Rouffaer sought to prove that the name referred only to a cloth decorated by a certain process, and not that it was a general term for decorated curtains and bed covers as asserted by Havell.

It is safe to assume that, generally, the term is, like so many of our modern Indian words, a word used almost solely by Europeans, though understood well enough by Indians with whom Europeans have dealings.

There is little more of interest to record concerning the history of the industry. Indian printed and painted cottons early became popular in Europe. After the Moorish invasion of Spain, where a cotton industry had been established since the thirteenth century, the Italians soon began importing from the Levant. Later, Holland took the lead, and from Holland it spread to France.

As early as 1676 a French refugee established a cotton printing plant at Richmond, and almost all the early patterns used by European printers at first were variations and adaptations from Indian cloths.

A curious French printed cotton of a later date (1783) preserved in the Victoria and Albert Museum, called "Les travaux de la manufacture de Jouy," shows some of the processes in use at that time, namely, beating the cotton with flails; printing by hand from wood blocks; and machine printing from copper plates.

How much of the spirit and detail of the early Indian cottons were used both in cotton printing and embroidery by the English in the seventeenth and eighteenth centuries will be shown later when patterns are discussed.

The European printed cotton trade rapidly developed until the result we see today. But in the eighteenth and even beyond the middle of the last century, up to some time in the 60's there was still a very considerable trade in decorated cottons with India.

Even nowadays considerable quantities are made and exported but mostly of inferior sorts of cloths used for clothing.

Of the finely decorated curtains, and bed and table covers, numbers are still made but it is no longer an industry of vast importance.

In the 80's something of a revival took place temporarily, but nothing of importance came from it permanently.

Before continuing this account to the descriptions of processes and patterns, a few words of explanation of certain Government and other particulars on the subject will be useful.

Mr. Havell made "Industrial tours" of certain parts of the Madras Presidency during the years 1885–88, and in his reports are various notes on cotton painting and printing as it then existed.

In various numbers of the "Journal of Indian Art" accounts may be found, notably the description of the process of manufacture as practised at Masulipatam (No. 19—1887 and No. 27—1889). But there is little or nothing to be found by European writers, except these accounts, more solid than the references already quoted.

During 1899 Mr. Rouffaer, with the help of the Dutch Government, instituted enquiries into the Madras methods of dyeing cottons. One of the objects of this enquiry was to compare the methods of the Madras workers with those of the Javanese, who still work extensively by somewhat similar methods.

That Mr. Rouffaer's enquiry was intended to be thorough may be seen from the list of questions put, which cover nearly ten printed folio pages.

The questions concern the processes employed very minutely, also the tools used, and a great many searching questions as to terms in use by the writers, and a strict enquiry as to the accuracy of Havell's statements in his "Journal of Indian Art" articles. These questions were sent by Government to various centres where cotton painting and printing was practised at that time, and the results of the enquiries made on the spot were reported on from Madura, Paramagudi, Kumbakonam, Negapatam, Chingleput district, Tinnevelly district, Wallajah and Masulipatam.

The book produced as the result of Rouffaer's work is the best of its sort published up to the present time, but it concerns Javanese work mostly, in which the method of the waxing of the cloth has a very great effect upon the sort of patterns produced.

For the general purposes of magazine articles and such ephemeral account of the industry, trifling inaccuracies in descriptions of processes are of little importance, and it is unnecessary to dwell on the mistakes which are inevitable, when persons, without a first-hand knowledge of a craft, attempt to describe its workings.

In the answers to Mr. Rouffaer's questions, sent from the different districts, it is amusing to note the circumlocution and inaccuracy in describing some simple process. A single instance among many may be given ; instead of simply stating that the cloth is placed in a vat of red dye during a certain stage of the process, our investigator says "it is washed in cold water, to which the substance for dyeing red has been added and boiled," a statement which is most confusing and inaccurate, as the cloth is not "washed" in the dye, and the red dye is not used cold.

The following account of the process of painting cotton as the art is now practised by an old cotton painter employed in the School of Arts, Madras, has been carefully verified in every particular.

That it varies somewhat in detail, here and there, from the practices in other places is certain, but substantially the processes are the same, wherever the art is now practised in the Madras Presidency, and where the painters still employ their old vegetable dyes.

It does not apply to block printing, but only to cloths entirely worked without the use of blocks, in fact to those cloths in which all the pattern is hand-worked.

The cloths generally used nowadays for decorating are English cottons, known as "grey jaconets," "white mulls" and "white cambrics," the last named being considered the best of all.

The principle which underlies the selecting of the cloth is that the texture should be close enough to allow of the brush or pen to move over it freely, fine lines and patterns being only possible on smooth cloth.

The Indian workmen prefer to purchase unbleached cloth, and to bleach this according to their own methods, as they believe there is less danger of weakening the fibre in this way.

This bleaching takes place partly with the first preparation, and partly as the cloth is exposed to water and sun during later stages of the process. It is first soaked in a solution of sheep's dung, chunam (lime) and water, in the proportion of one-half measure of chunam, one viss of dung and four measures of water, and is kept in this mixture for one night. In the morning it is taken out and well washed in clean water, preferably by a river, where it can be spread out on sand and kept moistened while being exposed to the sun. Under suitable conditions, nearly always to be found where cotton painters are at work, cunningly contrived flat beds of sand, for spreading the cloths, are made, and tiny channels for water are led into these so that during the bleaching process the cloth may be kept continually wet, with as little labour as possible.

This first bleaching process is continued for three or four days and the cloth is then finally washed and dried. The next stage of the process is the preparation with "gall-nuts." Myrobalans *(Terminalia chebula)* are first ground and boiled in water to form a thick paste, and then mixed with buffalo milk and water.

A solution sufficient for about two dozen pieces of cloth, one and one-half yards by three yards each, would be three-quarters of a viss of myrobalans, one-half measure of milk, and thirteen measures of water.

The cloths to be painted are well soaked in this solution, and then spread out to dry. The cloth is then soaked in a milk solution, which for the same amount of cloth would be made of ten pallams of myrobalans and three measures of milk. It is then dried, and is of a pale, rather dirtyish yellow colour. Throughout the galling processes the cloth, when being dried, is exposed to the sun on the same side each time, and this is the side selected for work with the colour, afterwards applied.

After galling and drying, the cloth is made soft and smooth by being pounded with a wooden mallet, the cloth folded and spread over a very smooth log ; it is then ready for taking the pattern. The process followed for any complicated pattern is, to first draw it on paper, after which the outline is pricked through with a fine point. A stencil of fine dots is thus produced, and laid over the cloth, and a small bag of loosely woven cotton is partly filled with charcoal powder and this is pounced or rubbed into the cloth through the stencil. The result is, the pattern in outline, somewhat faintly indicated by the charcoal powder. The tool which next comes into use for making the permanent outline can best be described as a rough sort of fountain pen (figures 5 and 5-A). There are several sorts of these, used according to whether the work is delicate or coarse, but the principle of them is the same.

A bamboo stick, about six inches long, is cut at one end into a point and the point split through the centre forming nibs, much like an ordinary pen nib ; above the point a more or less egg-shaped ball of fibre, aloe fibre or wool, or hair, is wound loosely, this forming the receptacle for the colour when the pen is in use. When the pen is to be used for wax, the nibs are formed with two points of iron placed a trifle apart and fastened into the end of the stick, and hair is wound round to form a ball. This wax pen is also sometimes formed with more than one set of nibs, so that several lines may be drawn at one time.

The colour used for the permanent outline is a black, produced by the following process :— Old bits of iron are heated, to a red heat, and, when cold, are washed in water. The bits are then put into an earthen pot with water to which is added a small quantity of jaggery ; the pot is tightly covered and the contents are allowed to remain in it for three weeks. Six measures of water, a viss of jaggery and ten pallams of iron are used.

The receipt for this solution as used by the printers at one time at Wallajah included, besides the jaggery, babul seeds with the outer cover or skin, and alum, but this solution was only allowed to remain for eight days. This iron liquor seems to be the only black for outlining in use by any of the cotton painters practising in the Madras Presidency, but a fairly intense black to cover large surfaces, such as backgrounds, is got generally by several immersions in indigo dye.

When the iron liquor is ready, the pen is well soaked in it and the outline of the pattern, previously pounced on the cloth, is then carefully drawn.

The fibrous ball of the pen retains a certain amount of the colouring matter and this part is gently squeezed as the line is drawn, the colour thereby flowing into the nibs and thence to the cloth. The line appears at first grey, but rapidly turns black. When the black outline is complete, the preparation for the red colour is begun, and this consists of a mordant of alum and sappan wood dissolved in water. The sappan wood is evidently merely to give a slightly reddish colour, so that the work done may be visible as it progresses, the alum forming the true mordant.

The solution is made by dissolving five pallams of alum in five measures of water, to which a small quantity of chips of sappan wood *(Cæsalpinia)* has been added, the pot covered, and left over night, when it is ready for use. This mordant is also applied with a pen similar to the one used for the outline, but fashioned somewhat according to the work to be done. If large spaces or thick lines are intended a large pen would be used. When a considerable surface is to be covered the pen is used more or less horizontally, rubbing back and forth to cover the space as equally as possible. When the cloth is dry, it is washed in clean running water, if possible, to remove any surplus iron liquid or alum. It is then soaked in a thin solution of myrobalans and water, one-fourth pallam myrobalans to one measure of water, and allowed to dry, when it becomes ready for the first dyeing operation, which is invariably the red dye. The red dye in use in the School of Arts is what is known as " Bengal madder " (the root of *Rubia cordifolia*). This is ground into powder and boiled in water until the desired strength is obtained and the prepared cloth is soaked in it and boiled until all the colouring matter is absorbed and a clear liquid remains.

The cloth when taken from the red dye will be found to be a dark red in the parts which were coated with the alum solution, and a much paler red in the other parts. This pale red will disappear entirely with bleaching, while the other and darker red remains permanent. The bleaching, which is again performed as stated above, takes three or four days, and the cloth is soaked in sheep's dung solution over night, before bleaching is begun. After the application of the red dye, the cloth is prepared for the blue colour. Indigo is the only blue dye in use in the School of Arts. The preparation of the cloth consists in covering all parts *not* to be dyed blue or green, with wax, as a resist for the dye. The wax is kept in a molten state in a pot over a fire, and it is applied to the cloth with a pen, as described above, with iron nibs. Only the parts of the pattern which are to receive a blue colour are left free, all other parts being covered with wax. A dull purple may be obtained by dyeing parts of the pattern already red, in the indigo, and the parts which are to be green are also first dyed blue. When the waxing is complete and the wax hard, the cloth is immersed in an indigo vat cold, until the required strength of colour is obtained. One-half viss of country indigo, procured already prepared in lumps, is mixed with one measure of seeds of the thagarai plant *(Cassia Tora)*, ten pallams of chunam, and twelve gallons of water. This mixture is boiled. The wax being more or less brittle, when hard, it often cracks when folded and thin irregular blue lines not intended on the finished pattern are often seen, and these are a sure indication that the cloth was dyed by the old wax process. After the blue dyeing, the wax is removed by immersing the cloth in boiling water and is afterward collected for future use. The next step in the process is to prepare the cloth for the final colouring of yellow and green.

The cloth is soaked in buffalo milk and water, used cold, and this has the effect of preventing the yellow dye from running, and it also tends to make the blue more permanent. The yellow dye is, with the exception of the black outline, the only one used directly on the cloth, and from various examples of old cloths, it seems to be the least permanent colour of the lot.

Yellow dye is prepared as follows :—Five pallams of myrobalans are boiled in two measures of water, to which is added ten pallams of alum ; the bark of the mango tree is sometimes used with this. The dye thus obtained is applied directly with the pen on those parts of the pattern which are to remain either yellow or green ; for the green, the yellow dye is applied on parts already dyed blue. It will be seen that by weakening or strengthening dyes as they are applied, various shades of colour can be obtained, weak blue over a weak red giving a light purplish or chocolate colour, weak blue and yellow giving pale green, and by various combinations of dark or light blue and yellow a fair variety of other greens is possible. But it is a most difficult thing to manipulate these shades of colour with any degree of certainty of result, and patterned cottons must in the majority of cases depend for their effect mostly on the simple red and blue dyes and the proportion in which these are used. The final washing and bleaching of the cloth is done with dhobi's earth, and salt and water, and exposing to the sun for a day or two. Five pallams of dhobi's earth and one-sixteenth measure of salt are used for one measure of water. The cloth may then be sized and smoothened and is finished. The sizing is done with water and boiled rice or conjee, and a high polish may be given by rubbing with a smooth chank shell. It is more usual, however, to merely fold the cloth after it is dried from the starching solution, and hammer it with a wooden mallet which makes it smooth. The photographs of pieces of cloths shown in figure 1 illustrate the process just described from start to finish : *(a)* is the cloth prepared for the first drawing of the pattern, and pounced with charcoal powder, *(b)* is the pattern drawn over the first outline with the iron solution, *(c)* is the cloth after the application of the mordant for the red dye (alum and sappan wood), *(d)* after the pattern has been dyed red and somewhat bleached, *(e)* shows the cloth partly covered with wax, the white spots being those parts which are to be coloured blue, in this instance they are leaves, which in the final cloth will be painted over with yellow dye and so made green, *(f)* the pattern dyed with the indigo, the leaves appearing blue, and *(g)* the finished pattern

after the leaves are made green by the application of the yellow dye, *(h)* the last section merely shows patches of the various dyes used.

Without colour the illustration is very incomplete. The process just described does not apply in detail to *block* printed cottons, though the preparations of the cloth are similar and the main essentials are the same. There are, however, two or three rather distinct methods of block printing; in one which is practised at Kumbakonam, the blocks are used both for applying the wax and mordant (figures 2-A to H). In another used for the prints made at Wallajah, a simple effect in two colours red and black, is got by two sets of blocks, one for a black outline, and one for a red filling as in figure 7; while in the third process, only the black outline and the mordant for the red dye is applied. This latter is one of the block printing processes employed at Masulipatam. It is sometimes simply that the outline of the pattern is done with blocks and the colours filled in afterward, or these outline blocks may be combined with blocks for the red dye and other colours besides, the red afterward filled in by hand. A first-hand description of printing from blocks which would take in the whole process from start to finish cannot be given by the present writer, but the actual outline block printing is quite simple and is the only essential difference in the process from that already described of entirely hand painted cottons.

Prints from many of the blocks in actual use are shown among the illustrations, so that the character of the outlines and patterns in use will be readily seen. The appearance of the blocks themselves is shown in the photograph—figure 3.

In block printing a pan or two of convenient size to contain the black colour is fitted with a small mat of cane or bamboo; over this are placed a few layers of rough woollen blanket, and generally on top of this a piece of baize, the blanket and baize forming a pad, which soaks up the colour and keeps the upper surface with just sufficient of the solution to form a good impression when the block is pressed on it and then on the cloth.

It is likely that some thickening substance, such as ground rice or gum, may be mixed with the iron solution, to make it more the consistency of printer's ink, which might be necessary when using blocks, but would not be so when a pen outline were made.

A quantity of the iron solution is then poured into the pan, though not enough to completely cover the pad. The block is then pressed on the pad and the impression transferred to the prepared cloth. One weakness of the patterns made by block printing is often observable at the corners and sides of a finished cloth, where a block may be stopped off in the middle, only a portion of the pattern showing. Or a border which should continue completely around the cloth may be used straight up and down or across from edge to edge as seen in figure 27, without reference to turning corners properly. With almost any border block, corner pieces should be separate; but they were seldom so used. However, block printing was probably more highly developed in India so far as the number of blocks was concerned than anywhere else, for Havell speaks of an instance he noted at Wallajah of a set of seventy-two blocks made for one particular pattern.

Many of the blocks could be rearranged in a great variety of ways and so the patterns could be varied to a large extent. The great difference between the Indian and European cotton prints, aside from differences of detail of pattern, is the fact that in the Indian prints each cloth is a more or less complete thing in itself, while the European printers have always worked much more to produce a repeating pattern. It is very difficult, if not impossible, to find in India a printed cotton, made by the old processes, which is the same yard by yard. When a block is used for printing preparatory to red dyeing the same process just described is used except that the mordant for red is applied instead of the iron solution. With the cloths made at Kumbakonam, where block printing was highly developed, the process is somewhat different in the initial stages. The cloth seems first to have been prepared with a red dye mordant completely covering it and making it grey in colour. The print was then stamped on from the block dipped in a solution of oxalic acid, thus producing

a pattern of white spots on the grey mordant ground (figure 2-A). The cloth was afterward dyed red, when the parts still covered with the mordant became red. The cloth is then waxed preparatory to the indigo dyeing (figure 2-B) and this waxing is also applied with a block. Prints from some of the blocks used for wax are shown in figures 56 to 59. Among the Kumbakonam cloths examined all seem to have been made by block printing entirely, though there are some few examples in which yellow, a good strong orange yellow, is used, but whether this is applied by dyeing in a vat or otherwise it is difficult to say. On certain examples, it appears that the yellow coloured portions of the cloth only were immersed in a yellow vat, and that the white spots in the pattern had been protected by wax. This seems a feasible method if the yellow dye is used cold. The yellow was certainly dyed in the example in mind after the blue and reds. The usual colours of Kumbakonam cloths, which are very distinctly different from any others produced in the Madras Presidency, are dark blue and chocolate with fine white lines in the pattern, though examples of red cloths with black are not infrequent. A rather distinct variety of cloth was made at one time in Tinnevelly in which apparently the pattern was done entirely with the pen. A small example of this work is shown in figure 4, a pen drawing three parallel lines having been used in the pattern of the filling of the centre. The appearance of the single pens is shown in figure 5, the centre one being used for wax. Though figure 4 is an unimportant thing in itself it very aptly shows the essential nature of the work produced by this process. Much more elaborate pen work is done at Kodali Karuppur in the Trichinopoly district, near the Lower Anicut, about twenty miles from Kumbakonam. At this place there is one workman at least who is capable of making most elaborate patterns over a whole cloth with hardly any guiding lines previously drawn. Though the reproductions give scarcely any idea of the beauty of the finished cloth the character of the patterns may be seen in figure 6. These Karuppur workmen are descendants of cotton decorators, who were employed by the last Rajas of Tanjore, and there are still preserved in Tanjore palace examples of old cloths worn by the Rajas and their consorts, made by them. Figures 7, 8, 9 and 10 show very unsatisfactory reproductions of this work ; the colours being mostly in shades of red do not appear with sufficient contrast in the illustrations, and the gold thread which forms an important part of the pattern is hardly detectable at all. As these cloths were not, so far as is known, made elsewhere than at Karuppur, a description of the process will be of interest. The essential difference between these and other decorated cottons is that the cloth to be afterward coloured is first woven with certain patterns or spots of gold thread. In the illustration (figure 7) the two dark bands running vertically toward the left end, the dark bands at top and bottom and the rough eight-pointed stars were woven in the white cloth in gold thread. The pattern is afterward worked around and over these gold spots, so that the result is a white pattern on a dark ground. The actual colours are two shades of a rich red with dots and border of a purplish black. This actual strip of cloth is the border of a white cloth worn by the Raja Sivaji. In its present state, through innumerable washings, the gold, which covers the parts dyed red and gives a slightly shiny appearance, is very much worn, and in new cloths made recently, even the gold is never prominent, but still adds greatly to the beauty of the finished products by its gentle lustre. Some small table covers, similar to figure 6, have been made recently with gold woven into the pattern, but it is an expensive process requiring very much care and was probably in the old days only used for fine wearing apparel and very special cloths. The cloths shown in figures 9 and 10, which are woven their whole length in gold lace, cost originally about Rs. 500 each. They are quite as heavy in weight as a modern silk and gold lace sari, and considering the amount of work and the actual weight of gold thread used the price cannot be considered excessive. At present the Karuppur workmen make mostly large cloths suitable for hangings, with illustrations of deities as their motives. These are generally very uninteresting compared with the cloths just described. An example is given in figure 11. Mention was previously made of the fact that repeating patterns were seldom made by the Indian

workmen with the intention of covering unlimited lengths of cloth, but repeating patterns were often used as fillings, as is shown by the illustrations (figures 12 and 13, 14-A, 15, 16 and 18) and occasionally otherwise in very fine and delicate patterns such as may be seen in some of the prints from wood blocks. In the library of the Tanjore palace a great quantity of Indian manuscripts are preserved in cloth covers forming envelopes for the loose pages of the manuscripts. There are, among these, many covers made from bits of old decorated cottons and a selection of these shown in figures 13 to 17 gives an idea of the patterns in use. The ones illustrated, excepting figure 14-B, are probably bits of old Karuppur cottons which were once used as clothing, and though some appear to have been block printed, it is more likely, from a close examination of them, that they were all produced by hand work with the pen. Figure 12-A is obviously done with a two-pointed pen ; the colours are white lines on a black ground, the spots being in red ; 13-B, a chevron pattern, is an attempt to imitate a common woven pattern, and 17-A is also an imitation of a woven pattern, in this instance, a pattern commonly made in local satin. No account of these Karuppur cloths has been published and they are very little known, and are quite distinct and beautiful among decorated cottons. Though perhaps not as important in the matter of pattern as are the highly elaborate examples of other places, for ordinary use they have a very distinct place, and the industry might be encouraged with good results. Certainly among all the minor decorated cottons none are so individual and so frequently pleasant and satisfactory both in pattern and colour as are these Karuppur examples. The processes in use for making decorated cottons have been described and the patterns produced by these methods, except those of Karuppur and Kumbakonam, may now be noted individually. The illustrations will give some idea as to the distribution of the patterns in the cloths, but their colour, which is their chief glory, is missing in the photographic reproductions. Among the cloths recently produced at Karuppur are examples similar to figure 19.

Figure 20 is a reproduction from a Sikkinayakanpettai cloth chiefly remarkable for its startling colours.

In the town of Negapatam, and in places quite near, at one time cottons somewhat resembling those of Kumbakonam, but done with a pen instead of blocks, were made ; no example was available for reproduction. Other sorts of patterns made near Negapatam, very rich in detail and coloured in shades of red, black, yellow and blue, are shown in figures 22, 23 and 24. In these, though the ground is very richly covered, they are drawn with skill and understanding, and the borders of swags, a very common motive, are, though a trifle crowded, well disposed. The most elaborately painted cloth, which it has been possible to find (figure 25), is also one of the richest and most beautiful in colour. It is said to have been made in Masulipatam and apparently it represents the visit of some Europeans to an Indian Court. The two-patterned strips on the right and left of the main cloth did not belong to it originally. The immense amount of detail and the care and elaboration of the drawing is very striking. The upper part in which are two figures of Indian princes, each accompanied by a youth, is separated by a band on which are various articles, evidently presents, vases, caskets and swords are distinguishable among them. Below are two figures of men and two of women, in European costume, while beside the principal male figure is a most wonderful dog, with a tail like an ostrich feather and a coat of wavy stripes resembling nothing so much as a patterned sari. In the group in which the Indian princes appear the figures are about thrice the size of the Europeans and are surrounded by framework of architectural character, in portions of which some twenty or more small figures appear. A band running across the bottom represents a hunting party with a large number of figures and animals and birds of various sorts. Every background and border is filled with minute decorative detail and the whole cloth is very pleasantly coloured and produces an excellent effect. Such very elaborate cloths are extremely rare ; in fact, this is the sole example in the large Indian Museum Collection in South Kensington. As it evidently refers to a very special occasion it would be of interest to know more of its history.

The cloth just described has been attributed to Masulipatam, but on what authority it is impossible to state.

It is the only cloth from this place which is known to the present writer, in which human figures on a large scale occur, and the ornament is not very suggestive of the characteristic Masulipatam patterns.

Though beasts and birds form very important motives in certain of the Masulipatam cloths, the older ones were often made with floral motives only.

A very fine example, now in the Indian Museum in London, is that shown in figure 26.

This cloth is probably very much faded and was originally considerably stronger in colour, but this in no way affects its particular beauty. The colours now are pale pinks and reds and mauves, brown and grey blues.

The outline of the pattern is red and not black as is usually the case.

The workmanship is very careful and delicate throughout, and the technique of the treatment of the various floral forms often suggests embroidery stitches. In fact, as one examines it closely, it very much suggests an old English linen embroidered bed cover. That it might have served as a pattern for one is more than likely.

Among block printed cloths, Masulipatam furnishes many very fine examples.

The prayer mat (figure 27) is block printed, with, as will be seen, a great variety of different blocks. The usual run of blocks used are very small and can be quite easily manipulated with one hand.

A block measuring as much as twelve inches either way is uncommonly large, most of those in use being of four or five inches in length or width.

Of course certain decorative motives require long narrow blocks, such as the conventional tree on either side of the niche of the prayer mat, but these would probably be made in two sections.

In this example black outline blocks form the pattern and some of the narrow borders are printed from blocks used for red ; the colours are mostly reds and blues, with the background of the spandrels of the arch in yellow. Looking into this pattern carefully, it will be observed that border blocks are often used either stopped off by another block at right angles, as in the wide border surrounding the niche, or are begun or finished from the centre of another motive, or brought to an end with no sufficient finishing.

Such are some of the minor details incident on the use of blocks, and especially when the same blocks are used for a variety of patterns. It is strongly reminiscent of printers' ornaments used at one time for leaflets and title pages.

A quite common practice with cottons used for curtains, table covers, or prayer mats, was to line them with another piece of cotton, generally with some small all-over pattern, and to strengthen the edges for an inch or two in width with a strip of silk. This gave them more weight and protected the edges from tears, and is a very useful hint to adopt.

The extra weight makes a curtain hang better, and tends to keep a bed or table cover in place in draughts or wind.

For convenience in working, the original cloth is torn into rather short lengths, but for quite small cloths such as table covers, two or more are usually painted or printed in one strip.

Such an example is that in figure 28, which also shows similar blocks in parts of the two separate patterns, though a different colour treatment of the same block in the second wide outer border.

Such variations are an easy matter in working by this method.

The cloth, which is in the Madras Government Museum, is very beautiful in colour. The circles, very delicately and minutely printed and variously coloured, and the corners which form the squares, are done with a fine pattern in one shade of red showing small white and blue spots.

An old example of a table cover with interestingly treated floral forms is the one in figure 29.

The centre filling of the pattern is evidently done from only two separate blocks, very nicely arranged as to their meeting in the centre, only repeating up and down, and not sideways. It is a most ingenious and skilful arrangement.

A very common pattern of curtain is the conventional tree pattern of figure 30.

This particular one is an old example, with lower border missing.

The two heads of lions with swords, in the centre of the upper part, point to its having been intended for Persian use.

As a matter of fact, this particular example, together with figures 27, 29 and 32, were taken from Persia to London and sold in London as "Antique Persian prints."

Many of these are actually marked with the names of Masulipatam workmen.

A quite modern rendering of this same pattern is shown in figure 31, but the dark background makes the similarity less apparent in the photograph than it is in reality.

A large bed cover is shown in figure 32.

In this example which is done on what would now be called "fine nainsook" the centre part is left quite plain, and from use and age, the cotton is of a beautiful ivory colour.

The ends of the cloth are very carefully finished by twisting groups of free threads at very short intervals, a quite common practice at one time on the better qualities of cloths.

Below the border in the centre is an inscription which refers to the pattern of the cloth, and has also a pious phrase, and the maker's name. It reads (1) Mould (that is, pattern), (2) Oh granter of bounties, (3) Meshadi Naza (this might also be translated "blanket of Meshad," a name which might refer to the cloth).

Inscriptions from other Masulipatam cloths do not give as much information; only a single example that has been examined, has been found with a date, Hijri 1252 (=1836); many have the word signifying "specimen" and "the best" or "first class" and several have the maker's name.

Among the large collection of Indian printed and painted cottons in the South Kensington Museum a great many old patterns not in use in very recent times may be found (figures 33, 34 and 35), especially among the examples attributed to Masulipatam.

The variations of the tree pattern, which was the most usual decorative motive for hand-coloured cloths, are shown among the illustrations.

The description accompanying each example will give some slight idea of their colouring, and it will be noticed that, while details vary considerably, the general distribution of pattern is similar.

It has always been something of a problem to account for the almost invariable use of swags for the borders of these cloths.

The use of garlands for personal decoration is very universal in Southern India, but the swag is more associated with painted ornament, such as wall paintings, and with architecture, and used in that way, it is not a motive in Hindu decoration except on these decorated cottons.

The inference to be drawn is that it was recognized on some imported cloth as a very adaptable and useful decorative motive, when seen by some cotton printer, and once it made its appearance, others seized upon it, and it soon became the favourite and almost universal border.

While one can forgive a great deal of improbability in ornament, a heavy, closely designed group of leaves, flowers, and other details, forming a swag, hung from a thin line, or perhaps not attached at all to its supports, is by no means good ornament. Then also, in the case of a curtain, when hung, one end at least must have the swags upside down while the sides are sideways. The swag border going completely around a cloth is really only quite suitable ornament when used on a bed cover or table cover, for in that case only can the complete border hang in its natural position.

That the swag quickly became stereotyped and careless in drawing and never really properly understood by the painters (as a bunch of fruit, leaves or flowers tied together and hung from supports) is very evident from almost any example of a cloth in which it is used.

The principle that an article should be decorated according to its use is very well understood among Indian craftsmen, and it is seldom the case with decorated cottons that this elementary rule is neglected.

A curtain, for instance, which is a thing to hang up and down, should not be designed like a table cover or bed cover or ceiling cloth, which is viewed from all sides.

The illustrations will give one an idea of the variety of patterns which were once turned out by Masulipatam workmen, and while one must always remember that modern commercial tendencies are all for vulgar standardizing of patterns, the increased use of blocks would also have the effect of diminishing the variety of pattern.

It is so much easier and quicker to do the same thing over and over again than to use one's ingenuity in creating and inventing new arrangements and combinations for each new cloth.

Probably the finest Indian decorated cottons which were exported to England were those of the late seventeenth and early eighteenth century, and the wealth of detail and richness of the floral forms can be imagined from the embroidered English linens which took their main inspiration from these early cloths.

The outline drawings (figures 37 to 40), though they do not show the beauty of the colouring, will help one to understand, by comparing them with the details of the older Indian cloths, how much English embroidery gained by the fine imported cottons from India.

We do not find on the continent that these Eastern products affected to any great extent the embroideries of the period, as they did in England.

That English seventeenth and eighteenth century embroidery developed a distinct style and character of its own, is directly attributable to the wealth of invention and detail which was supplied by the Indian cottons.

The English designer has always been a good borrower, not good as a mere imitator, but, realizing the individuality and beauty of the work of artists of other nations, they have assimilated and made their own the best which came their way.

This digression is by way of showing what can be done by an intelligent absorption of old details for use in new patterns.

The comparative paucity of modern cloths in the matter of interesting and varied form is very striking, and the tendency, with the decline of the trade, has been to neglect pattern or to degrade it by repetition which becomes quickly monotonous.

It is only by *continual* creation that any art can live.

There is one class of painted cottons which as yet has not been mentioned in detail, and that is the cloth originally used in decorating temple cars and pandals.

At present, the only centre where these are made more or less extensively is Kalahasti, and the reproductions (figures 43 and 44) are typical specimens of this work.

Used as intended, that is, as coverings for large spaces, and to be seen at some distance, they were very effective indeed, especially the older ones which were often beautiful in colour, reds, blues, yellows and green being used, and all of good vegetable dyes, and considerable black in bands and outlinings, helped to make them bold and striking in effect.

The poor modern imitations, done with synthetic red dye and a violent blue, applied directly on the cloth, are little better than caricatures.

At Kalahasti also, a few workmen once made a rather distinctive tree pattern curtain, shown in figure 45, and this has become, along with the type of figure 30, the most common pattern now to be found.

A variation is shown in figure 46, in which the pattern is somewhat on the same lines but the effect very different owing to a distinctly different treatment of colour.

Figure 47 is one of the latest of the types of cloths decorated with mythological subjects. It was made recently at Ponneri.

In the Indian Museum in London is a set of six old temple cloths from Madura. They have the effect of being coloured mostly in reds and black on a cream white ground, and hung as they are high on the wall give one a chance to judge of their effect at a distance.

Old temple cloths are difficult to find, but none that have been examined by the writer with the exception of a few to be mentioned presently are other than rather crude, though useful and effective enough for their purpose.

No great care or ability seems to have been lavished on them, and this quite rightly, as they are not intended for close and careful examination, but more as religious pictures which he who runs may read

A few years ago there was still living at Salem an old man who could, on occasion, make these temple tapestries.

His work showed decided ability and he was perhaps the last of the workmen mentioned by Mr. Havell in his tour reports of the 80's.

It was, perhaps, at Palakollu that the best temple cloths were made.

Though no complete single cloth of large size is available for study, the strips in the Madras Museum and in the School of Arts collection (figures 48 and 49) and the relatively small cloth (figure 53) are striking examples of this work.

The charm of the colour of figure 53 and the skill of the drawing is quite remarkable.

In Mr. Havell's reports he remarked on one of the Palakollu workers who made curtains which were afterward enhanced in effect by the application of gold leaf.

An example of one of these beautiful cloths is shown in figure 50.

The gold is used in a thin line for outlining and veining of the leaves, and though the colours, pale reds and blue, are faded, the gold is still brilliant, and used in such comparatively small quantities it greatly enhances the beauty of the cloth.

It is the choicest of all the specimens in the Government Museum.

Hand Blocks for printing Cotton.

The number of hand blocks used for printing cottons is so numerous that it is very difficult to make an adequate selection, which would show the characteristic patterns in use in various centres.

There are prints from several hundred different blocks in the Government Museum in Madras, and while these are partly grouped according to their place of origin, the origin of a great number is not known.

Then, too, similar blocks may have been in use in two or more places at one time, but a different treatment of the colouring of the finished cloth characteristic of different centres might easily lead one astray.

Some centres like Kumbakonam used blocks quite different from those found elsewhere, and though many of the Masulipatam blocks were copied and used in other places, it is generally easy to distinguish the original by its superior workmanship.

Many of the prints illustrated do not show to so good an advantage singly, as they would in use, when the print would be repeated many times.

This is one fairly good test of a repeating pattern, which should gain in beauty by repetition.

The origin of the blocks from which prints have been taken is noted in the description of the illustrations when possible.

Taking the blocks in groups from the different centres, the most individual seem on first sight to be those of Kumbakonam (figures 56 to 59). The reason for this is mainly because the only blocks available from which prints could be taken, happened to be those used for the wax printing, except the single block in figure 57.

Though not in every case, in a great many, this would mean that the background, only, of a pattern, is shown by those blocks used for wax.

In use, the wax might cover much detail of pattern, so that the true meaning of these Kumbakonam prints is, that they represent only the parts of a pattern on which no blue colour appears.

Except with colour reproductions at different stages of the process, it would be very difficult to give anything like an adequate idea of the manufacture of one of these cloths.

The Ponneri blocks (figures 60, 61, 63, 64 and 65) offer much interesting detail for study of patterns.

Occasionally there is a slight weakness of design in the repeat, that is, where the edges of one impression join those of the next, but the growth and detail of flower or leaf leaves little to criticize adversely.

Indeed, there is a mine of skilful and able invention in the patterns of Ponneri blocks, and one's only regret is that they are no longer in use, and even old examples of cloths made from them seem to have disappeared almost entirely.

A few examples of the actual cloths may be found among the samples in Dr. Forbes Watson's monumental work on Indian Textiles, but there are no very fine patterns among those from Ponneri.

In a few instances, when the single impression from a block did not give a fair idea of its value as a pattern two or more impressions are shown as it would appear in an actual cloth (figures 57, 58, 59, 61, 63, 64, 65, 66, 67 and 77).

This, in the case of some of the border blocks, was essential to complete the whole unit, and one will at once notice how much the prints gain from repetition.

The reproductions are all the same size as the original prints.

In numerous instances two blocks might be used, one to fill in with a red mordant, the spaces left for it in the first outline block, as in figures 68, 69, 70 and 72. Three blocks, one to be used after the other, are shown in figure 73. In this particular instance, probably the third block was used to print the red mordant a second time, after the cloth was once dyed red, to give it a deeper colour in the spots thus over printed.

A few examples of blocks with the printing surface made of flat wire on edge, fastened into the wood, are given, and these few are from Wallajah (figure 74).

Many of the larger wire blocks from which prints were available were but sections of a design of considerable size, and as none of them were of any particular artistic merit it was thought better not to illustrate them.

The fact is, that the Wallajah workmen seem to have developed the mechanical part of their work out of all proportion to its artistic part, and of all the Wallajah cloths examined, which were of the crudest colours and coarsest texture, not a single example which was even passably good in design was met with.

The crudity of the drawing can be imagined from the two figures of girls dancing shown in figure 72 and that of the elephant in figure 71. The girl pattern is only given to show the combination of two blocks to form one pattern—an outline block for black and a solid block for red.

The delicacy and charm of the fine outline blocks used at Masulipatam will be seen in the illustrations (figures 54 and 67).

The manner of their use can be seen by a reference to some of the illustrations of the block-printed Masulipatam cloths.

Various typical border block patterns are shown in figures 76 and 77, variations of the common " mango " pattern are given in figure 78, and a few repeating patterns in figure 79.

In concluding this account of cotton painting and printing, it is to be noted that the work of one or two centres where cotton prints are, or were, made have not been accorded much attention.

The reason for this is that the work produced does not seem to be worth preserving. There is a certain class of work much produced nowadays which may be useful in providing occupation for artisans of a sort, but which has little or no claim to be called "good" artistically.

The sort of table cloth or curtain that some persons consider good enough for the spare bed-room, figures in this class.

It is hoped that this account of the industry has avoided, except where necessary for illustration or demonstration, this branch of cotton painting and printing work.

APPENDIX I.

List of places where painted or printed cottons were made in 1885–88 according to Mr. Havell's lists in G.Os. (Revenue) Nos. 791, dated 30th March 1885 ; 695, dated 11th August 1886 ; 619, dated 29th June 1887 ; and 441, dated 20th June 1888, with the approximate number of persons engaged in the industry and the sort of cloths made at that time.

[This list includes not only those making decorative cloths such as bed covers, curtains, etc., but also those decorating cloths for personal wear.]

Arcot.—Cloths similar to those of Walajanagar.

Banganapalle.—Seventy families making rough handkerchiefs and turbans.

Cholloor.—Rough block-printed handkerchiefs, turbans and screen cloths ; one man making entirely hand-painted cloths.

Cocanada.—Thirty-five houses of palampore printers making common block-printed cloths and inferior hand-painted ones also (this includes Jagannadhapuram).

Dharapuram.—Ten families making rough palampores and chintzes.

Gollapalem.—Ordinary block-printed canopies, one or two families making inferior hand-painted cloths.

Jammalamadugu.—One hundred families making inferior turbans for Mussalmans.

Jagannadhapuram.—(See Cocanada.)

Jayankondasholapuram.—At a village four miles from this place hand-painted cloths and handkerchiefs produced, similar to those of Kumbakonam and Nagore.

Jaggayyapet.—Seventeen families printing borders to white cloths for women's wear.

Kalahasti.—Palampores and printed cloths.

Kumbakonam.—Hand-painted (?) cloths and handkerchiefs similar to those of Nagore.

Madura.—One man who can produce palampores similar to those of Kalahasti and Salem.

Manamadura.—One man who produces hand-painted cloths.

Masulipatam.—Three families who can make hand-painted canopies and screen cloths to order. One hundred and forty-five families who make canopies, screen cloths, prayer cloths, men's handkerchiefs, turbans, cloth for jackets worn by Mussalmans, and women's cloths, mostly block printed.

Nagore.—Cloths and handkerchiefs of inferior kinds, block printed, better sorts done by hand.

Nandyal.—Thirty-two families of cotton printers making rough handkerchiefs and turbans.

Narasapur.—Fifty houses of printers making palampores.

Negapatam.—Inferior cloths similar to those of Nagore.

Pamban.—Painted cloths similar to those of Pennagudi and Manamadura.

Pamidi.—Rough handkerchiefs, turbans and screen cloths ; one man who can make hand-painted cloths ; thirty houses of printers employing two hundred workmen.

Palakollu.—Fifteen houses of printers making palampores, turbans, handkerchiefs and women's cloths ; one man who can make hand-painted canopies and screen cloths.

Pennagudi, Salem.—Palampores and painted cloths with mythological subjects.

Sadras, Satyavedu.—Chintzes and red handkerchiefs ; almost extinct.

Tiruppur.—Five families making rough palampores and chintzes.

Uraiyur.—Six families making rough and fine palampores.

Vaniyambadi.—Inferior block-printed cloths for women's wear.

Vizagapatam.—Four families making common block-printed borders on white cloths.

Vizianagram.—Four families making block-printed borders.

Walajanagar.—Block-printed cloths and handkerchiefs of an inferior kind.

The tour reports from which this list was made contains many minor inaccuracies besides direct contradictions. Several centres which probably produced painted or printed cottons at this time (1885–86) are not mentioned, namely, Saidapet, Ponneri, Kodali Karuppur and Sikkinayakanpettai. It is possible that Mr. Havell meant to include this last place in Kumbakonam.

Considering, however, how very difficult it is to get any accurate information as to numbers employed in these scattered home industries, we may be very grateful for the list, incomplete and inaccurate as it undoubtedly is.

It will be seen that no more definite information as to actual numbers employed is given (except in one case) than so many "houses" or "families," but in the case of Pamidi mention is made of thirty houses and two hundred workmen.

From five to seven working in each house or family would probably be a fair average to reckon upon.

While to one who understands something of the industry, tne terms "palampores," "screen eloths," "canopies," etc., may not be very confusing, it will be well to explain what was evidently meant by these terms as Mr. Havell used them.

"Palampore" is used very roughly and in some cases quite inaccurately. The term should apply only to a bed cover, but in these reports it often includes curtains as well. "Canopies" would be cloths used as ceiling covers for pandals or tents; or in temple cars; "screen cloths" might be either large or small curtains or the large cloths used for decorating a temple car when used in processions.

"Handkerchief" defines both small and large square cloths sometimes as much as four yards each way and greatly used by the Negroes of the Southern United States.

"Madras handkerchiefs" are mentioned in "Uncle Tom's Cabin."

"Prayer cloths" are small oblong cloths used by Mussalmans when praying. They take the place of a prayer rug or mat, but being made of cotton are much cheaper in price.

There are two mentions of "chintzes" and this referred probably not to the old meaning of a spotted cloth, but to a glazed or calendered cloth, such as we nowadays call chintz.

In addition to the descriptive matter in the tour reports, Mr. Havell collected many samples of cloths which would have illustrated his remarks in a more satisfactory manner.

Some of these samples are still in the Madras Museum.

APPENDIX II.

List of places from which particulars of the cotton painting and printing industry were obtained in response to the enquiry instituted by Mr. G. P. Rouffaer in 1899 ; with notes relating to the processes employed.

[This paper is a collection of reports from various local Collectors, Deputy Collectors, Sub-Magistrates and Tahsildars, and is signed by Mr. Edgar Thurston (25th April 1901), who was then in charge of the Government Museum.]

Conjeeveram.—Pens used. *Rubia cordifolia* (Indian madder) used for red colour.

Kumbakonam.—Block printing in use ; no pens used ; the printing may be done on one side of the cloth or on both sides, imported red dyes used.

Madura.—Blocks in use made of brass (flat brass wire fitted into a wooden block to form the pattern) with bamboo handle. Aniline or alizarine dyes in general use. Cloths worn by men and women, and handkerchiefs, made ; sent to Negapatam for export.

Masulipatam.—Trade received a severe blow in 1864 at the time of the great cyclone ; pens used, blocks used, imported red dyes used, lead pencils used for drawing the patterns.

Nagore.—Pen work used, no block printing.

Negapatam.—Pens used, no block printing, cloths exported to Penang and Achean ; pounced paper patterns used. Imported red dyes used.

Paramagudi.—Pens of different sizes used, blocks do not seem to have been used.

Sikkil (four miles west of Negapatam).—Printing by blocks carried on. Wax method not in use.

Tinnevelly.—Pens used and blocks also, imported dyes used, little or no export trade done, one instance of a small tin stencil in use.

Valipalaiyam (a part of Nagore).—Printing by blocks carried on, and pen work also.

Wallajah.—Wax not used, brass wire blocks used, also all wood blocks, imported red dye used and brushes made of palmyra stems used.

In this report the most extraordinary number of contradictions are to be found and in some of the separate accounts the confusion is almost impossible to straighten out.

It is useful to us in one way as it shows how absolutely futile it is to expect accurate technical information from untrained persons.

One rather striking feature of the reports is the prevalence of the use of imported dyes. The dyers, finding them somewhat easier to use than their fine old vegetable colours, have given up, to a great extent, the use of country madder. But it must not be inferred from this report that imported dyes are used exclusively, for such is *not* the case.

Madder has been supplanted by the foreign dyes to a much greater extent than indigo, indigo being still commonly used.

In the note on printing in Wallajah, it will be seen that a brush of palmyra was used. This is because cheap crude imported colours were used on the cloths produced, which could be painted or stained directly with these ugly dyes.

They are neither beautiful nor permanent, and the Wallajah cloths are by far the worst of any produced in the Madras Presidency.

The term "pen" has been used to indicate the tool in general use for hand-painted cloths described and illustrated in the text.

This is frequently referred to as a "brush" both by the workmen and others, but the term "pen" seems to describe it more accurately.

APPENDIX III.

List of places in which decorative cottons are now made (1915) according to the most recent information obtainable.

[This list does *not* include places where cloths for men's or women's wear are decorated, but only where such cloths as palampores, curtains, table covers, screen cloths, etc., are made.]

Jammalamadugu.—Rather rough but quite effective cloths done in black and red are produced.

Kalahasti.—Large screen cloths and curtains are made decorated with scenes from Hindu mythology ; the blue colour now used is nearly always an imported colour applied directly to the pattern ; it has been the ruin of the colour of these once beautiful cloths.

Kumbakonam.—Good wax-printed cloths are still made of the same colour as formerly.

Kodali Karuppur.—Next to the work done at Masulipatam the workmen at this place produce the most interesting cloths at the present time.

Masulipatam.—Fine cloths are still made ; generally now, only curtains and small table covers, but the patterns and colours are distinctly good.

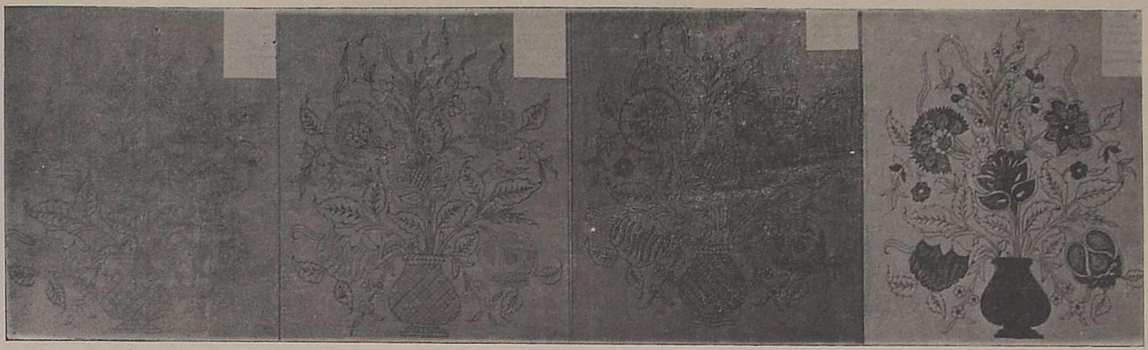
Ponneri.—Cloths both block printed and hand painted are still produced, in a considerable variety of styles and patterns.

Salem.—Up to two years ago there was a workman here who produced large cloths with scenes from Hindu mythology, somewhat of the same style as those of Kalahasti.

Sikkinayakanpettai.—Cloths of very crude colours stained with synthetic dyes are made here.

Saidapet.—Block-printed cloths generally of a small size, for table covers, are made.

ILLUSTRATIONS.



A B C D

Fig. 1.

A

SHOWS THE PREPARED CLOTH WITH POUNCED CHARCOAL PATTERN.

B

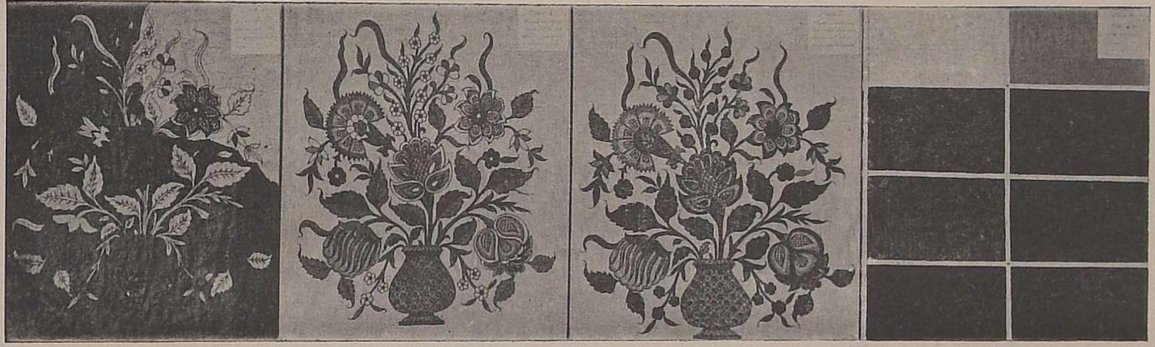
THE PATTERN DRAWN IN BLACK PERMANENT OUTLINE.

C

THE RED PARTS PREPARED WITH ALUM AND SAPPAN WOOD MORDANT.

D

THE CLOTH DYED RED AND PARTIALLY BLEACHED.



E F G H

Fig. 1.

E

THE CLOTH PARTIALLY WAXED, PREPARATORY TO DYEING BLUE.

F

THE CLOTH AFTER IT HAS BEEN DYED BLUE AND THE WAX REMOVED.

G

THE FINISHED CLOTH AFTER THE FINAL COLOURING WITH YELLOW.

H

SAMPLES OF THE DYES IN USE.

Size 1' 6½" wide ; 5' 3½" long.

School of Arts Collection, Madras.

FIG. 2-A.

A.—BORDER OF A KUMBAKONAM CLOTH MORDANTED, AND PRINTED WITH PATTERN.

Size 25" × 11".
Colours dark and pale grey.
" Moon crescent " pattern. Rat's ear shawl.

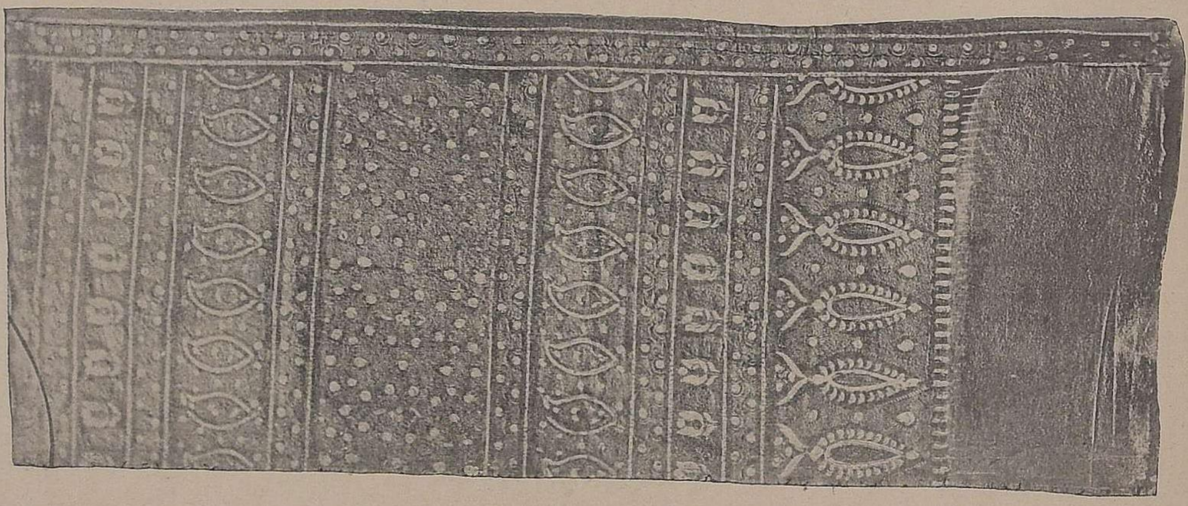


FIG. 2-B.

B.—THE SAME PATTERN AS A, BUT SHOWN AFTER BEING DYED RED AND PARTLY COVERED WITH WAX FOR BLUE DYEING.

Size 26" × 11".

School of Arts Collection, Madras.

FIG. 2-C.

BORDER OF A KUMBAKONAM CLOTH.

Size 15½" × 20".
Black and white lines and dots on a red ground.

" Mimusops flower " pattern.
School of Arts Collection, Madras.

FIG. 2-D.

BORDER OF A KUMBAKONAM CLOTH.

Size 15¼" × 20".
Black and white spots and lines on a red ground.

" Elephant leg flower " pattern.
School of Arts Collection, Madras.

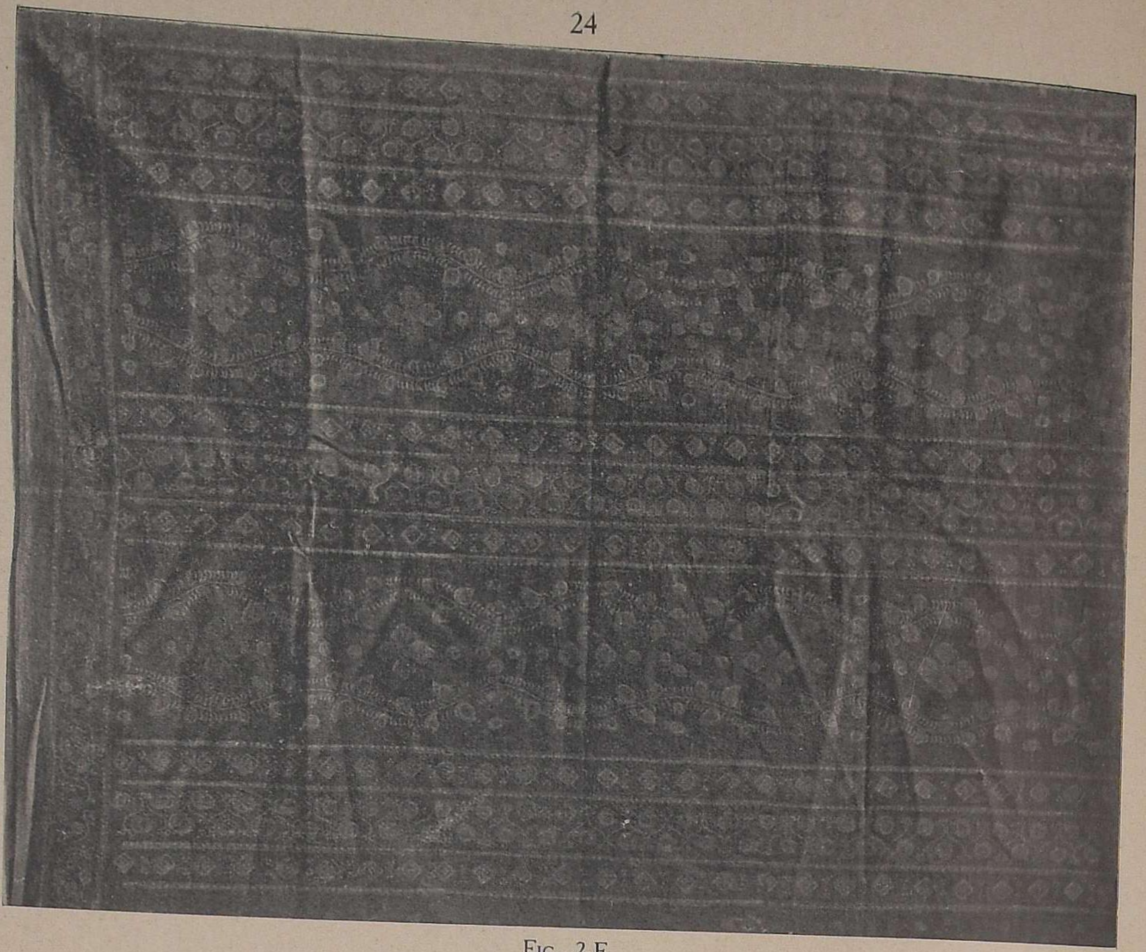


Fig. 2-E.
BORDER OF A KUMBAKONAM CLOTH.
Size 17" × 20". Light and dark yellow, on a deep chocolate, almost black, ground.
School of Arts Collection, Madras.

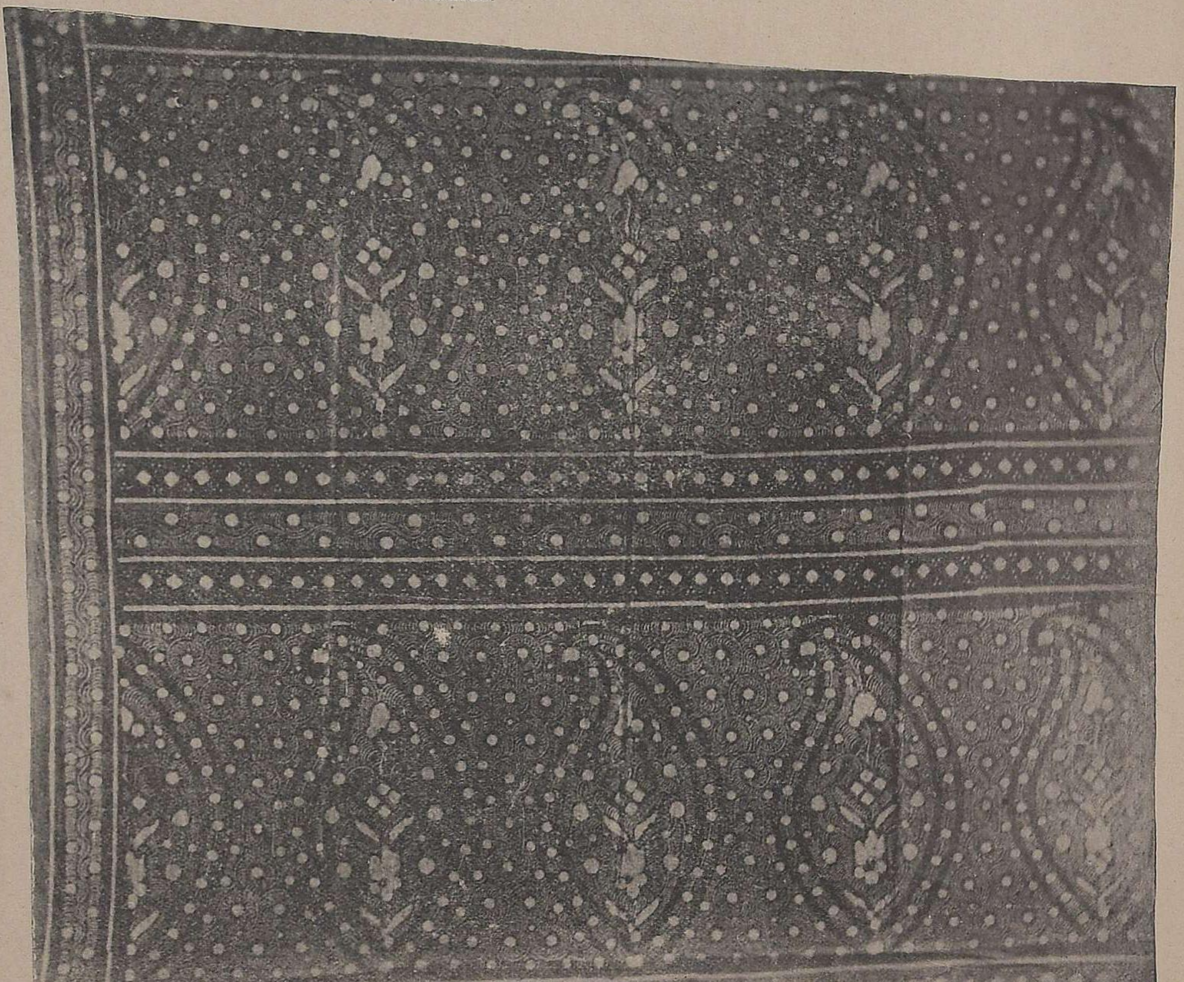


Fig. 2-F.
BORDER OF A KUMBAKONAM CLOTH.

Size 17" × 20".
Cloth dyed red before being waxed and dyed blue.

Colours deep chocolate, red and white.
"Mango pattern" tappisaram.
School of Arts Collection, Madras.

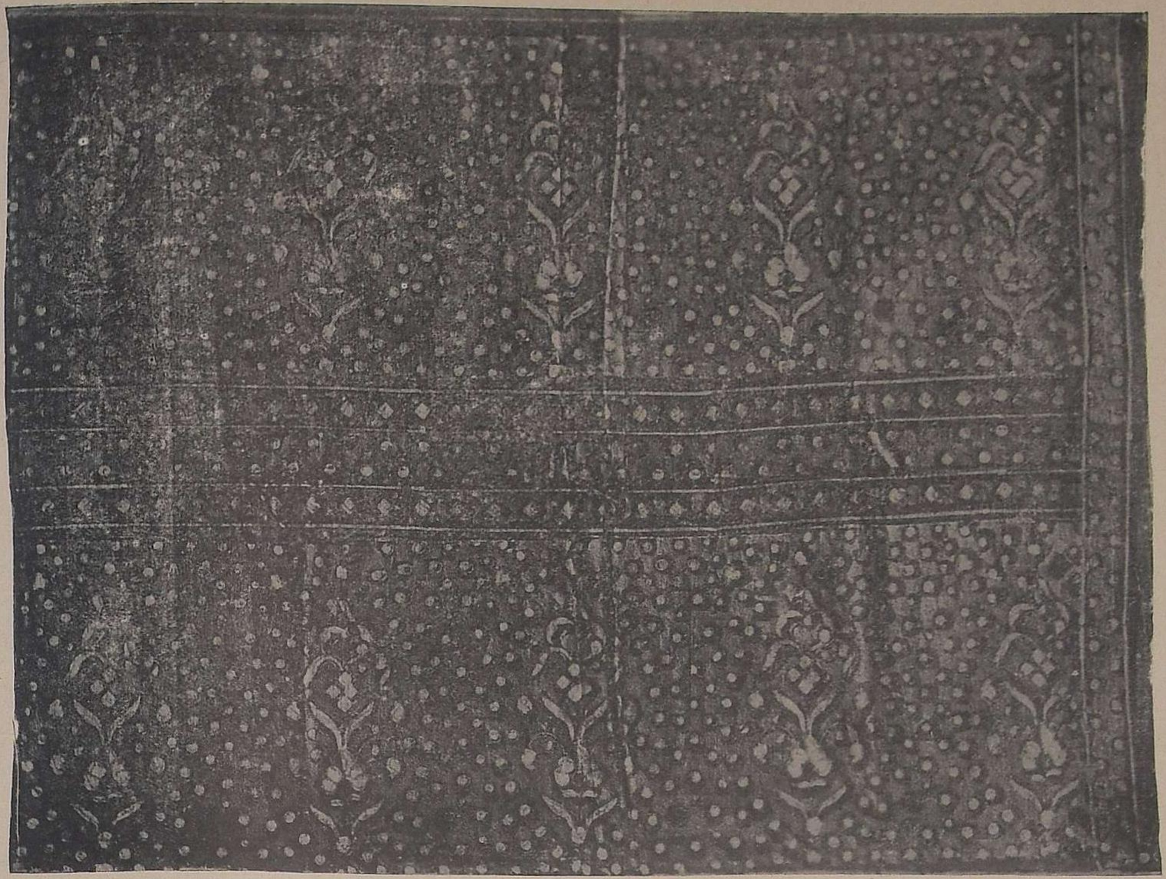


Fig. 2-G.

Same pattern as figure 2-F but partly covered with wax preparatory to blue dyeing.

School of Arts Collection, Madras.

Fig. 2 H.

BORDER OF A FINISHED KUMBAKONAM CLOTH.

Size $20\frac{1}{2}'' \times 16''$. Colours dark and medium blue, chocolate and white dots and lines.

"Chrysanthemum" pattern, tappisaram.

School of Arts Collection, Madras.

Fig. 3.

WOOD HAND BLOCKS USED IN PRINTING COTTONS.

The size of the first block in upper row is 8" × 4" × 2" (thick). The fourth block on top row and first in lower row show the appearance at back. The depth of the cutting is from three-sixteenths to one quarter inch.

The cutting is done on the cross grain of the wood, which is teak

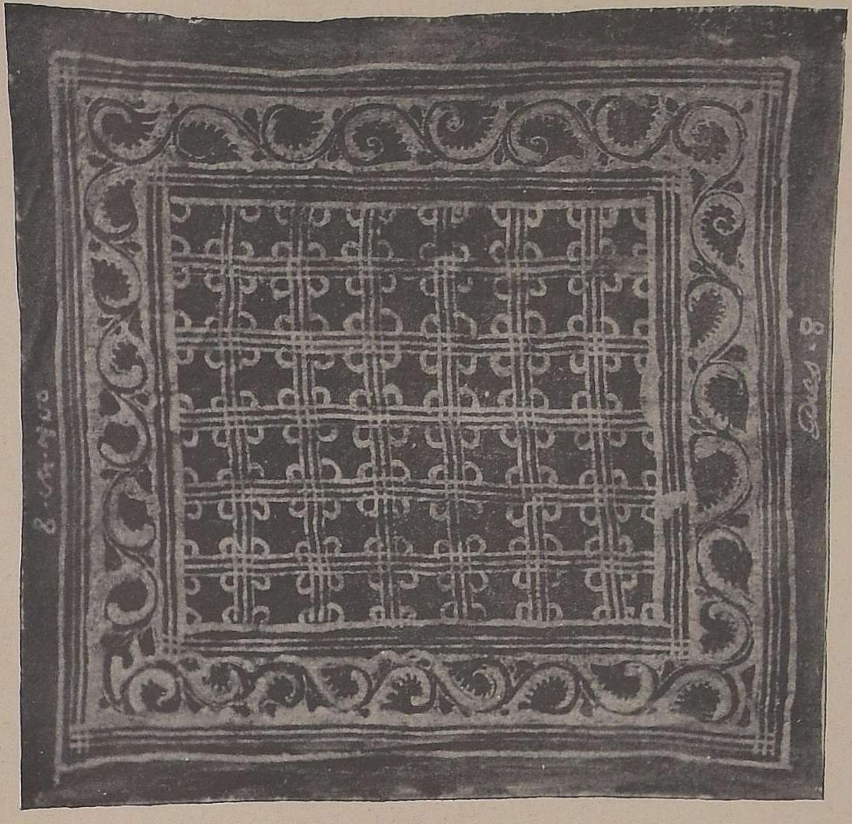


Fig. 4.

SMALL SQUARE CLOTH FROM TINNEVELLY.

Size $9\frac{1}{2}'' \times 10''$.
White lines on a red ground, black scroll on white border.
This shows the use of a three pointed pen, as well as single pointed ones.
School of Arts Collection, Madras.

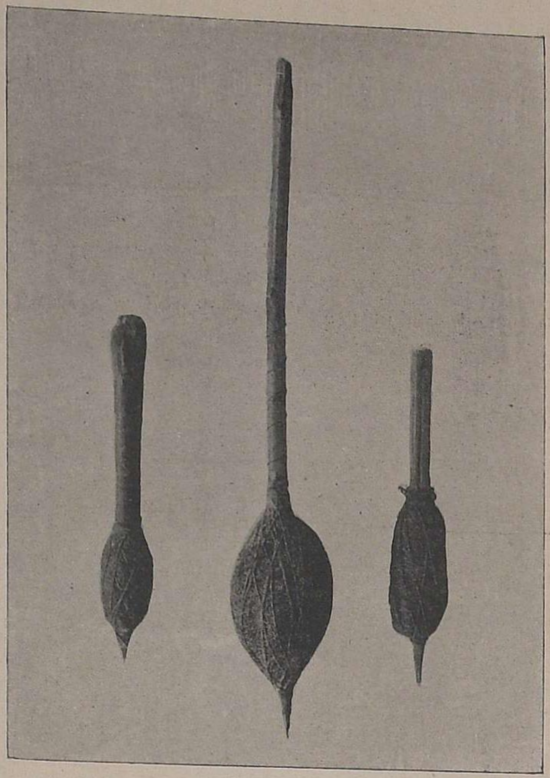


Fig. 5.

THE "PENS" USED FOR HANDWORK ON PAINTED COTTONS.

Full size.

The centre one is used for wax and the bulb is wound with hair and the points are of iron. The two side ones are used for colour or mordant, and are wound with wool, the bamboo handle being fashioned into nibs at the end.

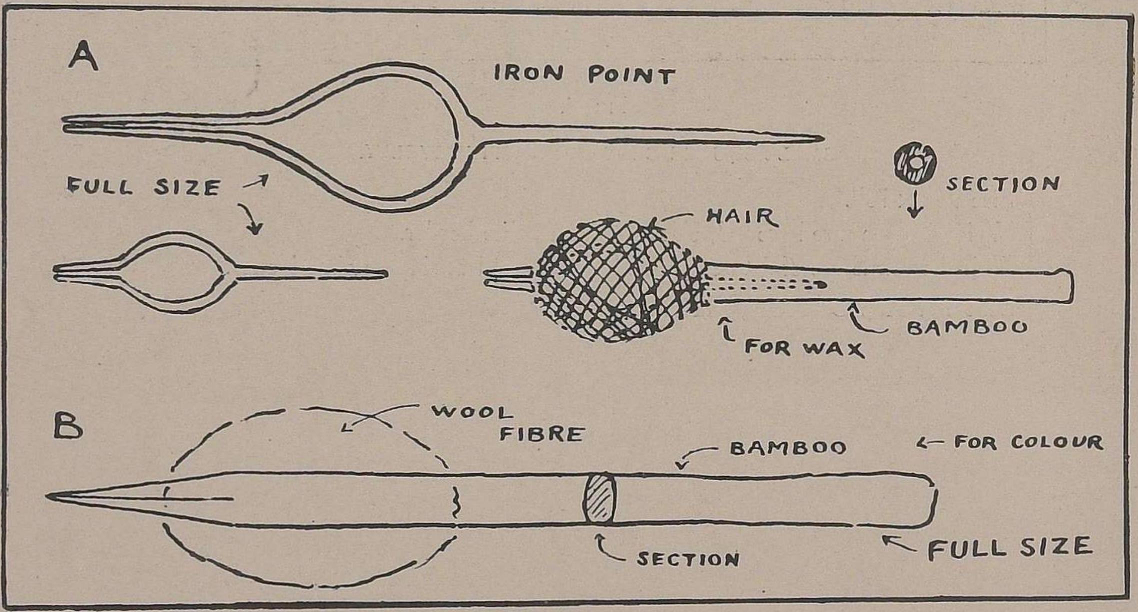


Fig. 5-A.

THE CONSTRUCTION OF THE PENS USED FOR HANDWORK IN COTTON PAINTING ARE HERE SHOWN.

Only the pen used for wax is furnished with iron points, the others being fashioned from a piece of bamboo.

FIG. 6-A.
MODERN KARUPPUR TABLE COVER.
Size 36" × 36".
In the outside border are lines of gold thread woven in the cloth. Small mango-shaped spots in the corner are also of gold thread. The pattern is in white on a dark purplish red background.

FIG. 6-B.
MODERN KARUPPUR TABLE COVER.
Size 40" × 40".
The border and corner spots have gold thread in parts. The pattern is white on a deep red ground.

FIG. 6-C.
MODERN KARUPPUR TABLE COVER.
Size 32" × 32".
The pattern is in white on a rich red background.

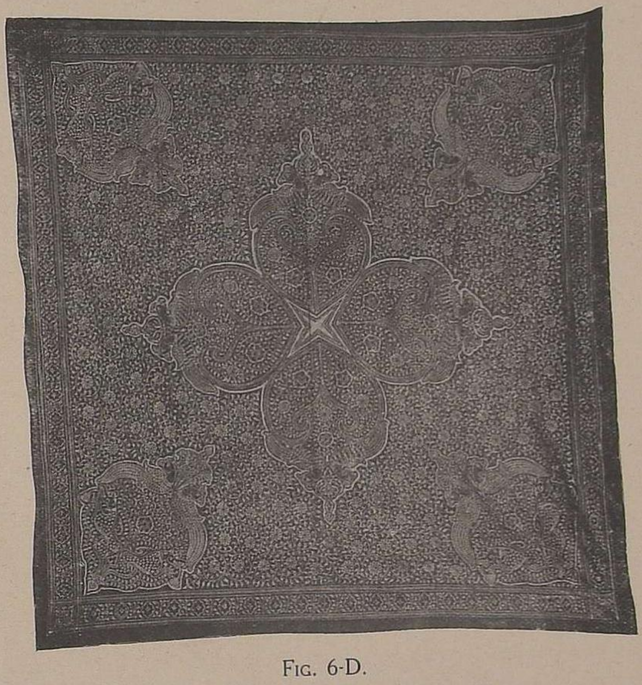


FIG. 6-D.
MODERN KARUPPUR TABLE COVER.
Size 36" × 36".
The pattern is in white on brownish background.

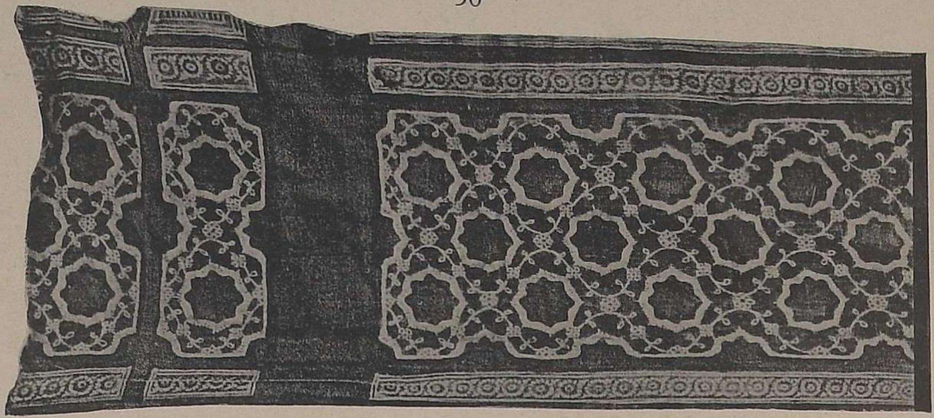


FIG. 7.

BORDER FROM A CLOTH WORN BY THE LAST RAJA OF TANJORE.

Width $6\frac{1}{2}$ inches.

The narrow outer borders have a deep purplish black background. The dark parts of the pattern are in two shades of red, with gold thread in the wide band across, and in the eight-pointed stars.

The pattern is in white. School of Arts Collection, Madras.

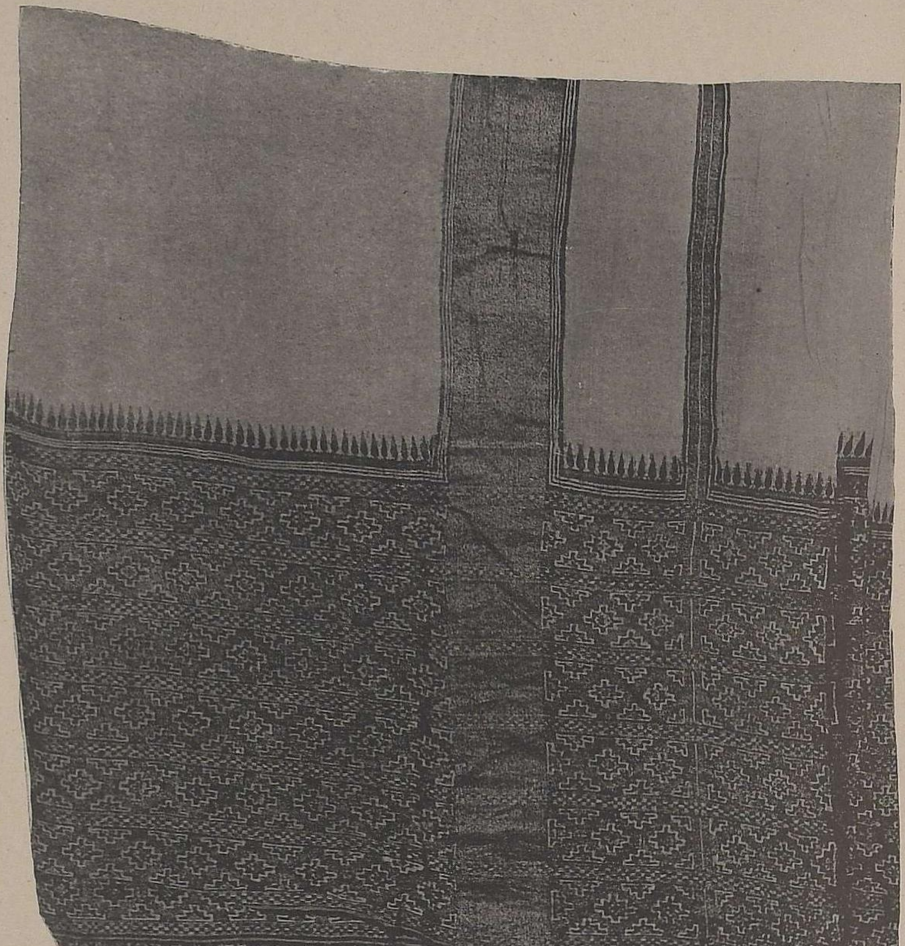


FIG. 8.

KARUPPUR MAN'S CLOTH (LABELLED IN TAMIL "KARUPPUR WASTIE").

The border is about 12 inches wide.

The bands running vertically are of gold thread with coloured lines at edges. The upper part of cloth is white.

The pattern is in red, black, white and gold. Tanjore Palace Collection.

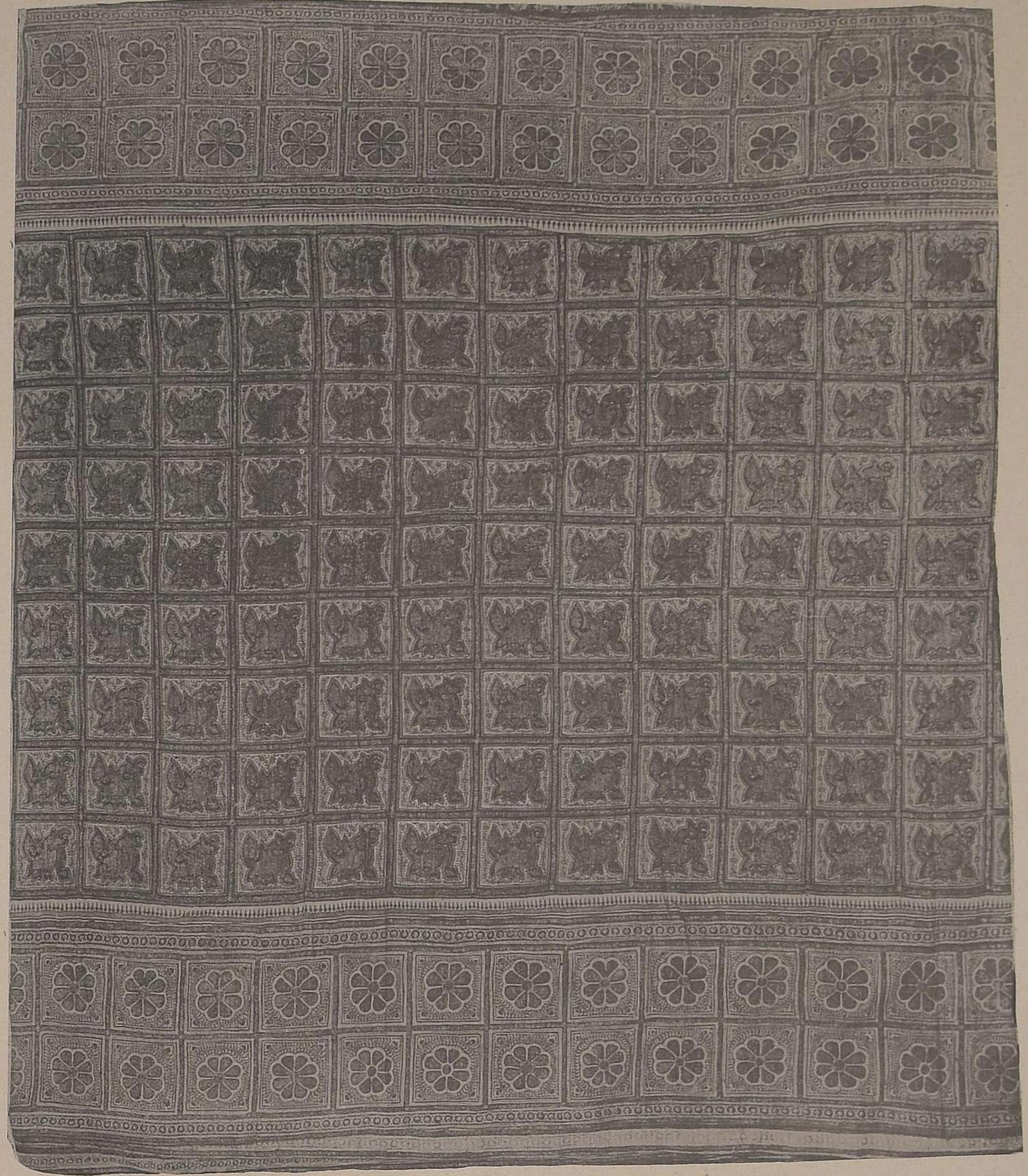


Fig. 9.

KARUPPUR SARI.

Size about 40 inches wide by 8 yards long.
This portion shows the centre filling of a woman's sari.
The cloth has a similar end border to figure 10.
The ground is red with the pattern in white, and in gold thread.
There are black and yellow also in the pattern.

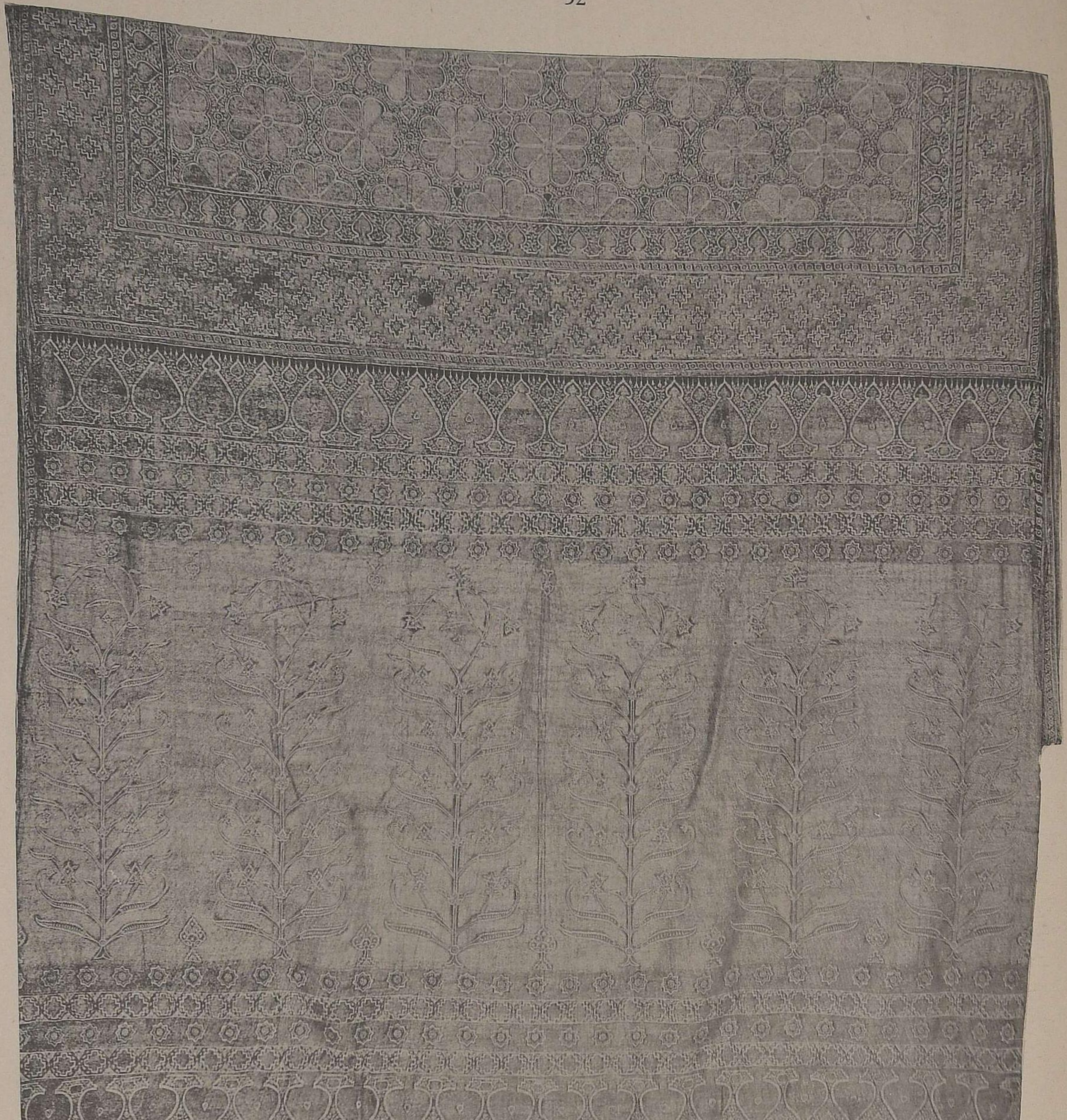


Fig. 10.

KARUPPUR SARI.

Size about 40 inches wide by 8 yards long.
This portion shows the end border and a small part of the main cloth.
The pattern is in white on a red ground, which is mostly covered with gold thread.
Tanjore Palace Collection.

FIG. 11.
MODERN KARUPPUR SCREEN CLOTH.

The treatment of the design is quite different from the other cloths decorated with similar subjects.

The rich ornamental border is seldom found in the older cloths.

The colours are black outline, blue, yellow, red and green.

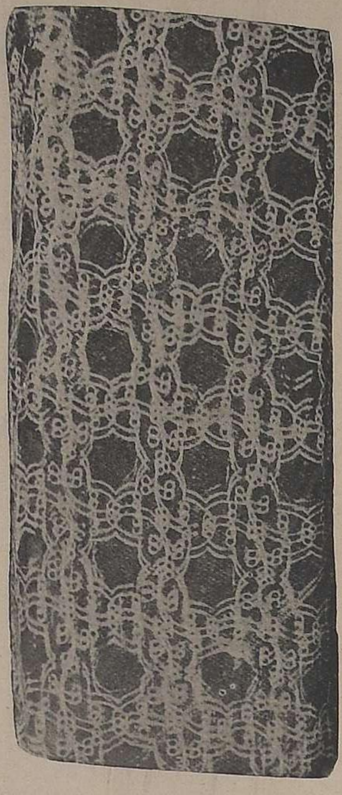


FIG. 12-A.

KARUPPUR COTTON, MS. COVER.

White lines, done with a double pen, on a black ground, coarse cloth, centres red, and with red dots in scrolls.

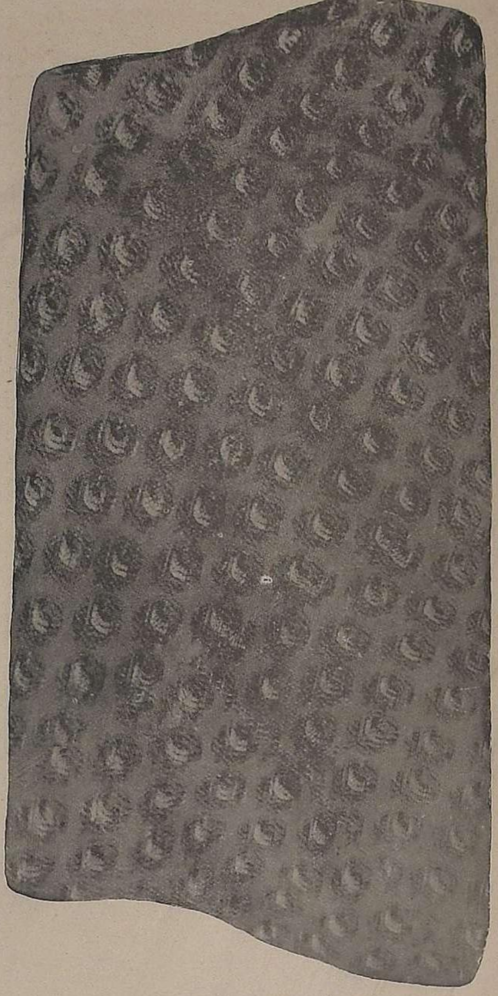


FIG. 12-B.

KARUPPUR COTTON, MS. COVER.

Coarse cloth.

Salmon red ground, flowers dark purplish brown with red spots, outline in dark red, leaves yellow.

FIG. 13-A.

KARUPPUR COTTON, MS. ENVELOPE.

Similar pattern and colouring to figure 15-A.

FIG. 13-B.

KARUPPUR COTTON, MS. ENVELOPE.

Chevron pattern imitating woven stuff, red, white, blue, yellow and black.

Fig. 14-A.

KARUPPUR COTTON, MS. COVER.

Centres red with white borders, yellow spots in ogee forms, green and blue ground.

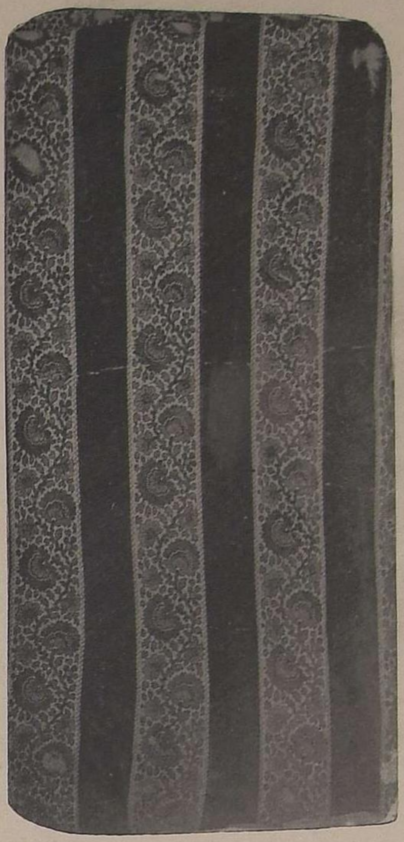


Fig. 14 B.

BLOCK PRINTED COTTON, MS. COVER.

Origin unknown.

Solid, dark red brown stripes, white ground, yellow and green flowers, outlined in black.

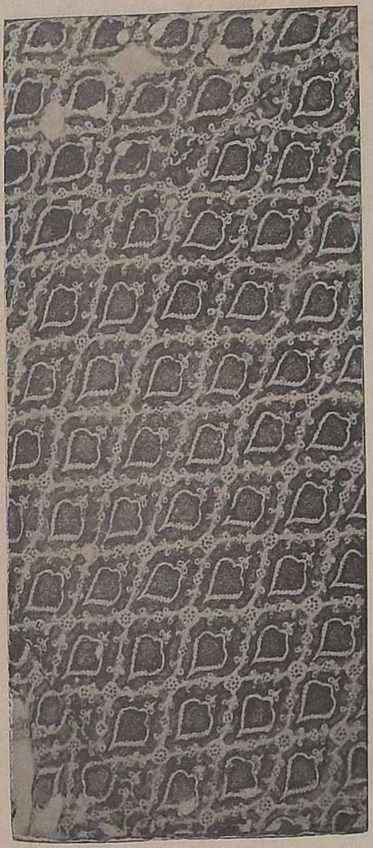


Fig. 15-A.

KARUPPUR COTTON, MS. ENVELOPE OR COVER.

Green ground with white pattern in which are red and yellow spots.

Centres of the ogees are woven in gold thread on a red background, darker at edges.

The sizes of these covers range from 8 inches to 15 inches in length.

Fig. 15-B.

KARUPPUR COTTON, MS. ENVELOPE.

Ground in two shades of red, white scroll with black lines, yellow in squares between scrolls. All of these MS. covers are from the Tanjore Library.

Fig. 16-A.

KARUPPUR COTTON, MS. COVER.

Centres, red ground with gold thread.

Dark red, brown and red spots forming ogee pattern, white ground.

Fig. 16-B.

KARUPPUR COTTON, MS. COVER.

Green ground with yellow, red, white and black pattern, solid red circles in centres, with gold thread.

Fig. 17-A.

KARUPPUR COTTON, MS. COVER.

Black and red stripes.

An imitation of a commonly woven satin made at Ayyampet.

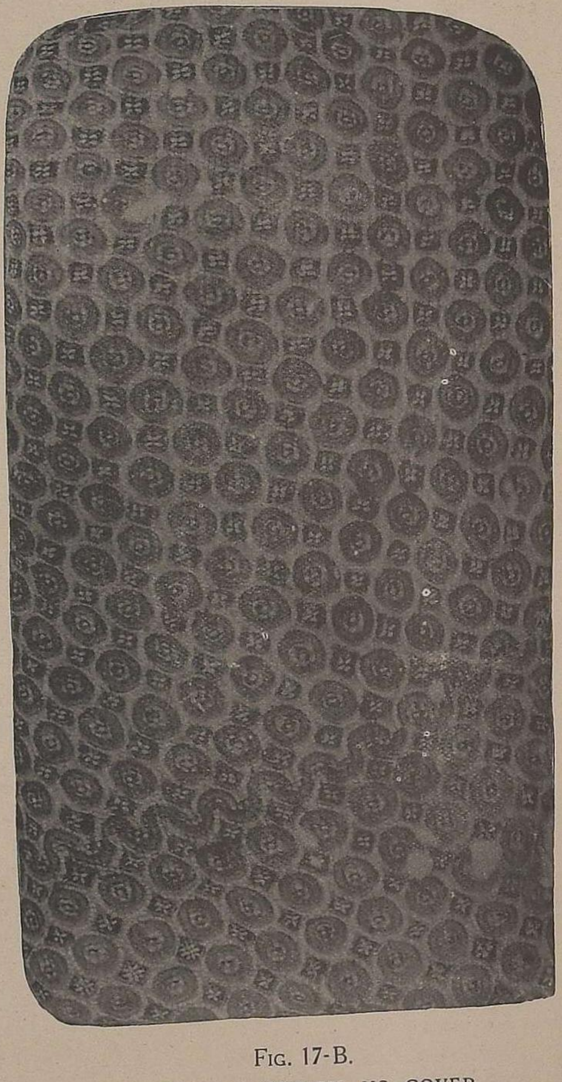


Fig. 17-B.

KARUPPUR COTTON, MS. COVER.

Blue ground ; spaces between circles, red, with white pattern ; circles, white, with red centres, green ground, and yellow dots.

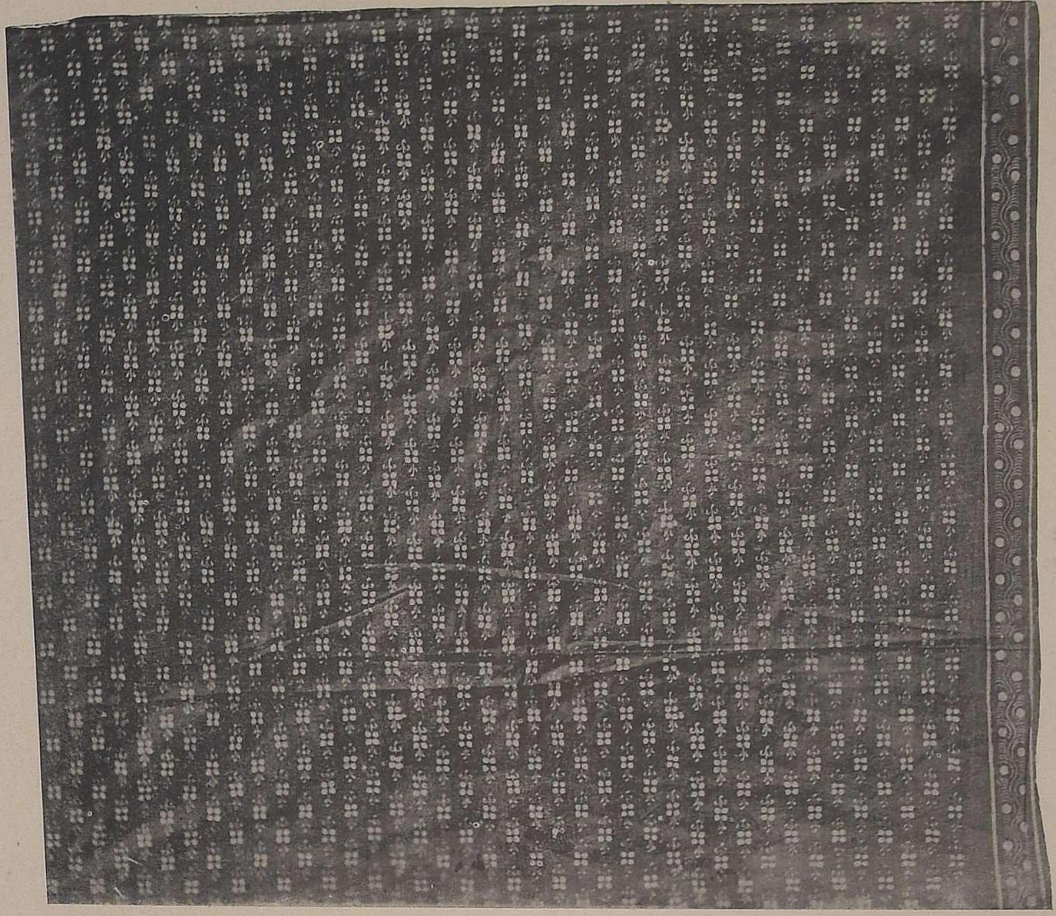


FIG. 18.

CENTRE PART OR FILLING OF A KUMBAKONAM CLOTH.

Size $20\frac{1}{2}'' \times 18''$.
Dark red with white pattern.
School of Arts Collection, Madras.

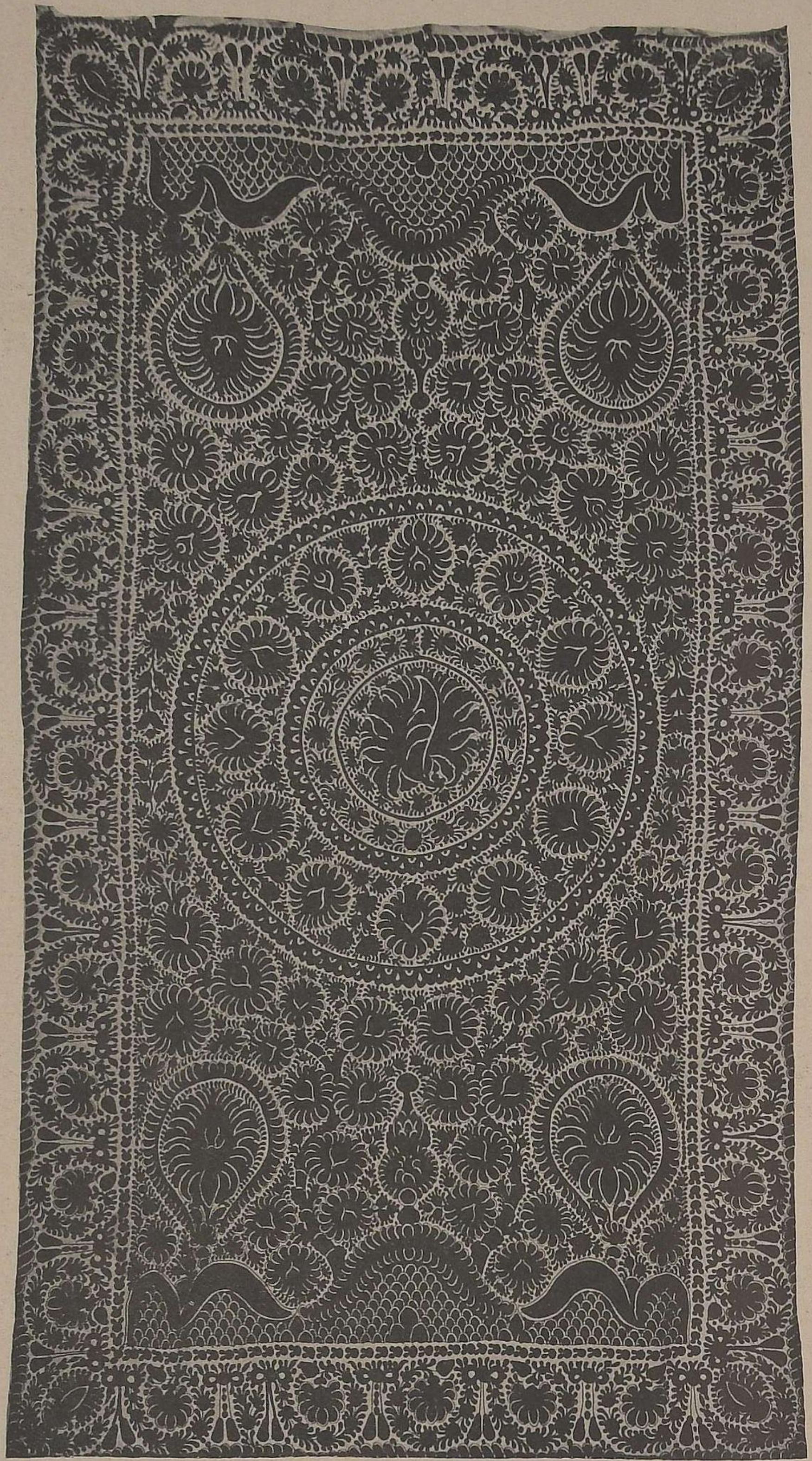


Fig. 19.

CURTAIN, PROBABLY MADE NEAR NEGAPATAM.

Size 7' 8" × 4' 2".

The outlines of the pattern are deep brown, almost black, and the colouring is in shades of red on a white ground.

Government Museum Collection, Madras.

Fig. 20.

SCREEN CLOTH FROM SIKKANAYAKANPETTAI.

Size 15' × 6' 6".

The subject is, in the centre, Asmanagiry representing the marriage of Maha Vishnu with Lakshmi.

Below are the ten avatars of Vishnu, two rishis, and a dancer. On the left side, Krishna and Garuda ; on the right, Saraswati and Hanuman.

Fig. 21.

A FRAGMENT OF AN OLD SCREEN CLOTH.

Size 2' × 3'.

The texture is coarse and the drawing and arrangement, crude, but effective.

The background is an ivory white, and the figures are outlined in black, much faded.

The dominant colours are reds, but there are some faded yellows and greens as well.

School of Arts Collection, Madras.

FIG. 22

CURTAIN, PROBABLY MADE NEAR NEGAPATAM.

Size 7' 2" × 9' 10".

This curtain is distinct in colour scheme from the others illustrated. Red predominates, but black is used in considerable quantity, on the tree trunk and branches, and in shading and accentuating of the outline. The background is of a pale faded yellow, broken by white dots.

Government Museum Collection, Madras.

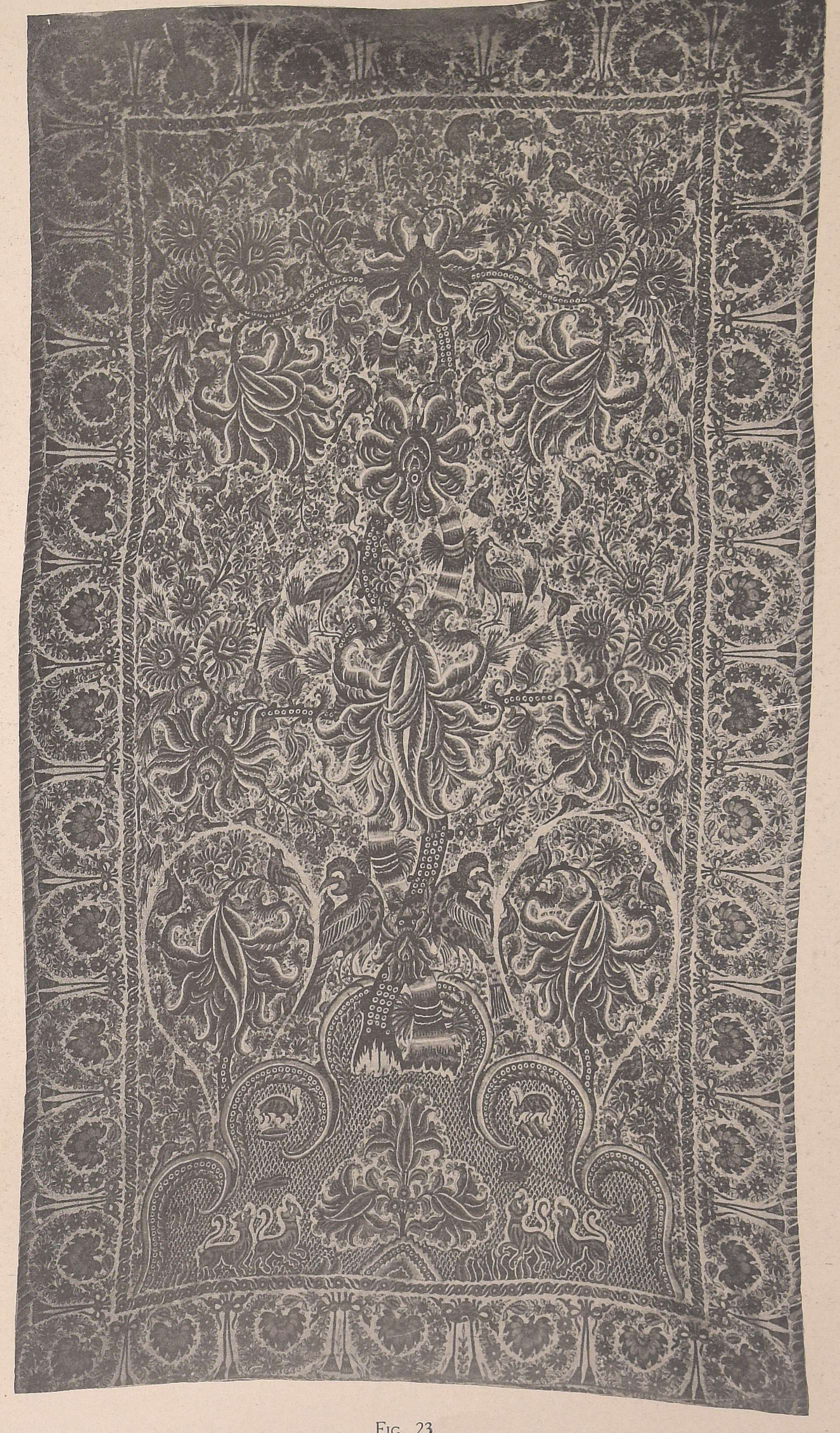


FIG. 23.

CURTAIN, PROBABLY MADE NEAR NEGAPATAM.

Size 8' 6" × 4' 11".

There is considerable black used in the tree trunk and in other parts of the pattern. The dominant colour is red, the background and parts of the border are in pale yellow, and white.

Government Museum Collection, Madras.

Fig. 24.

CURTAIN, PROBABLY MADE AT KALAHASTI.

Size 8' 2" × 6'.

Red predominates in the colouring. The outline is a deep red brown, and green and blue are also used.

Government Museum Collection, Madras.

Fig. 25.

A UNIQUE CLOTH ATTRIBUTED TO MASULIPATAM, SEVENTEENTH CENTURY.

The main part of the cloth evidently commemorates the visit of some Europeans to an Indian court.

The wealth of detail is equalled by the richness of the colour scheme, in which red predominates.

Above are shown two Indian Princes with two youths, and below are four other figures, three of which at least the two men and the woman on the left, are in European costumes of the seventeenth century. The woman's figure on the right is somewhat puzzling as the dress is apparently a sari, the necklace an "adagai," while the face, the dressing of the hair and the large hair comb are western. The cock protruding from the woman's sari also adds a touch of mystery.

Every inch of this interesting cloth is worth careful study, and the band below, depicting a hunting scene, is particularly rich in detail.

The two side borders, and the top border, are from another cloth, and though no figures appear in these patterns, the forms are rich and interesting ornamentally.

It would be interesting to know, definitely, exactly to what event this cloth relates, and we might start investigation from the head-dress of the Indian Princes, which would probably furnish a clue to the court represented.

India Museum Collection, London.

Fig. 26.

MASULIPATAM BED COVER.

Size 10' 10" × 7' 6".

Very fine pattern and delicate workmanship.

The outline in red ; pale pinks and mauves, brown, and grey blues, for the pattern. The absence of black outline is noticeable.

India Museum Collection, London.

Fig. 27.

MASULIPATAM PRAYER MAT.

Size 4' 1" × 2' 11".
Black outline, blue, green and red pattern.
School of Arts Collection, Madras.

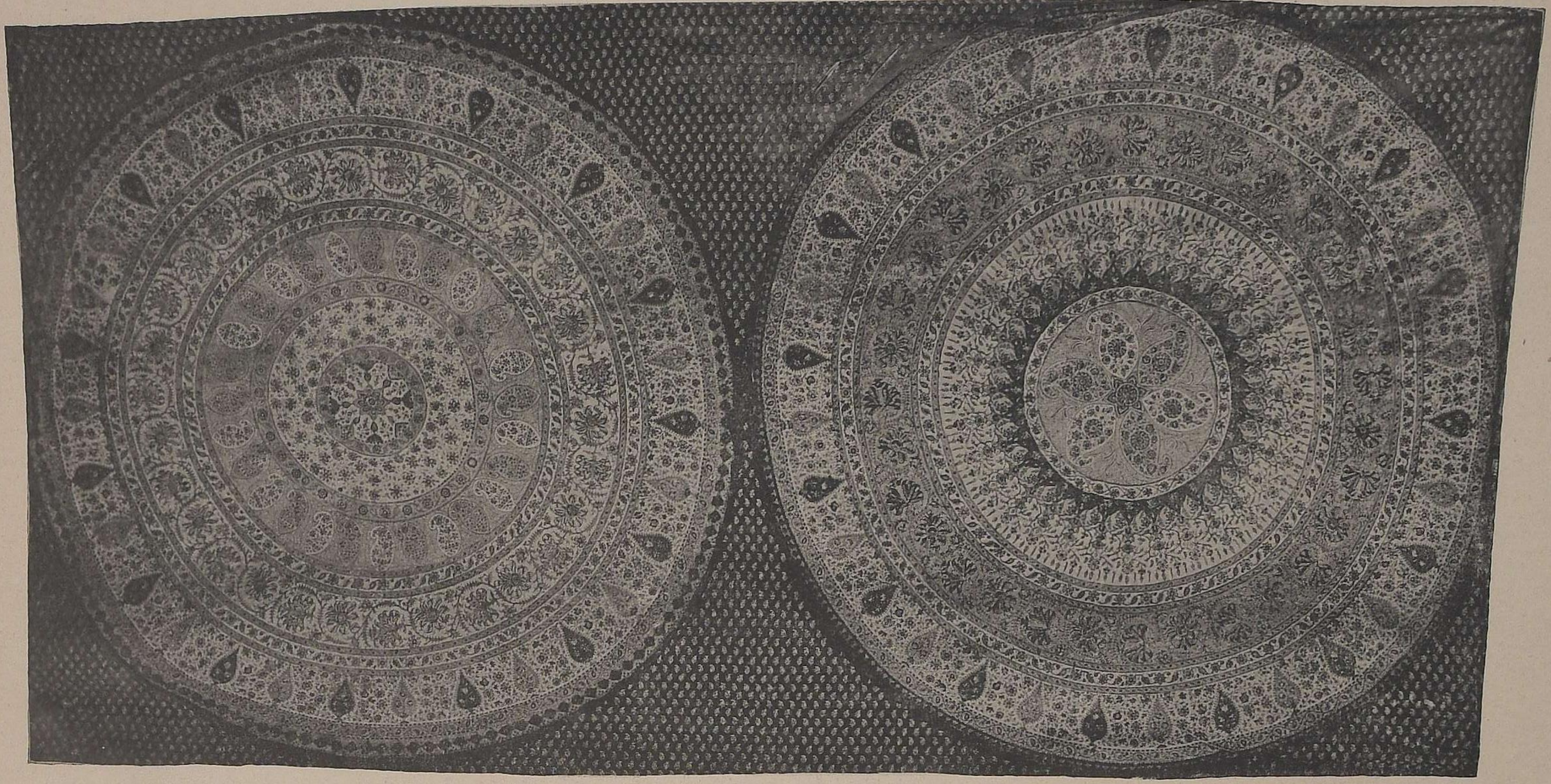


Fig. 28.

TWO MASULIPATAM TABLE COVERS.

Size 7' × 3' 7".
Background of the circles, red (with small pattern in black, white and blue), pattern in blue, red, black and yellow.
Government Museum Collection, Madras.

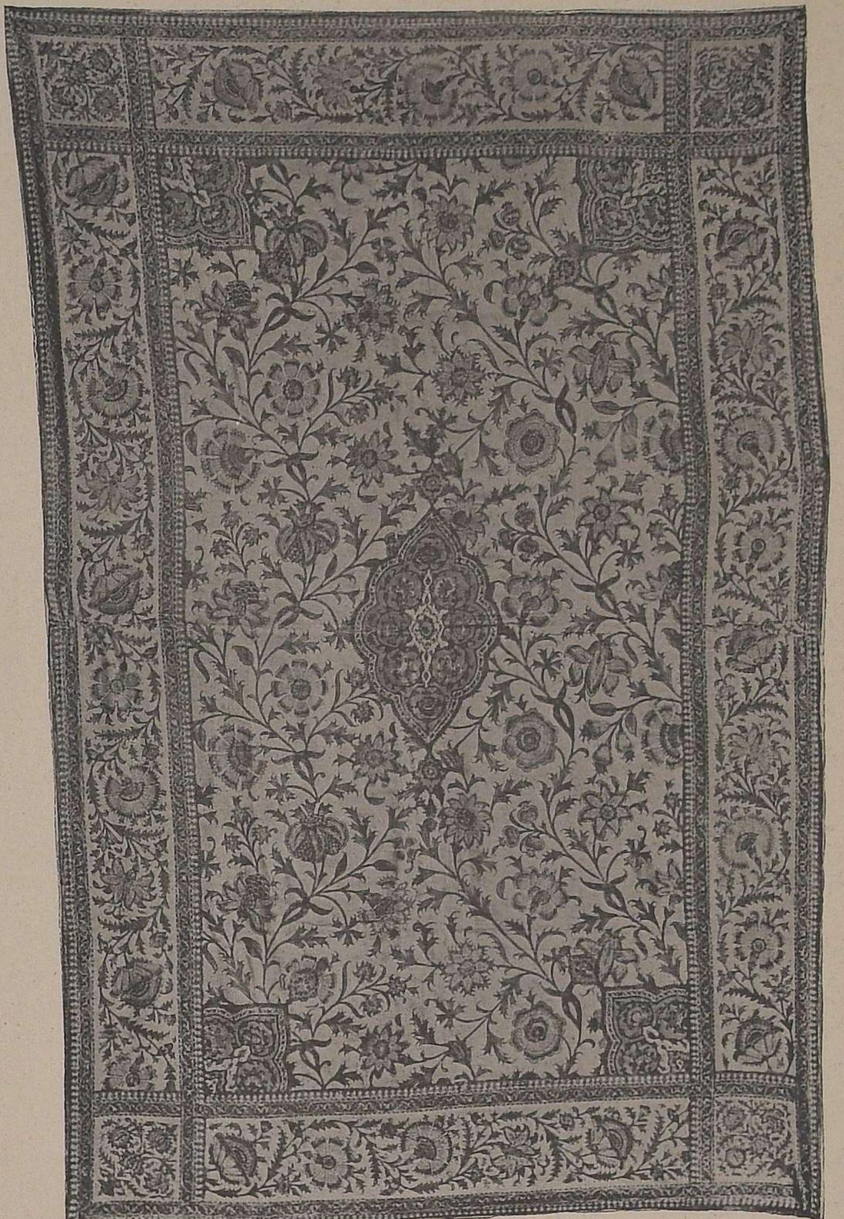


Fig. 29.

MASULIPATAM TABLE COVER.

Size 4' 5" × 2' 11".

Soft, much faded reds, mauves, blue greens, yellow greens and chocolate.

School of Arts Collection, Madras.

FIG. 30.

MASULIPATAM CURTAIN.

Size 5' 8" × 3' 6".

Black outline.

Yellow background in spandrels of arches, blue and red in pattern, dark chocolate red stags at base ; lower border missing.

School of Arts Collection, Madras.

FIG. 31.

MODERN MASULIPATAM CURTAIN.

Size 6' 4" × 3' 5".

Red background in central portion, black outline and red, blue and yellow pattern.

A very old pattern still commonly made.

School of Arts Collection, Madras.

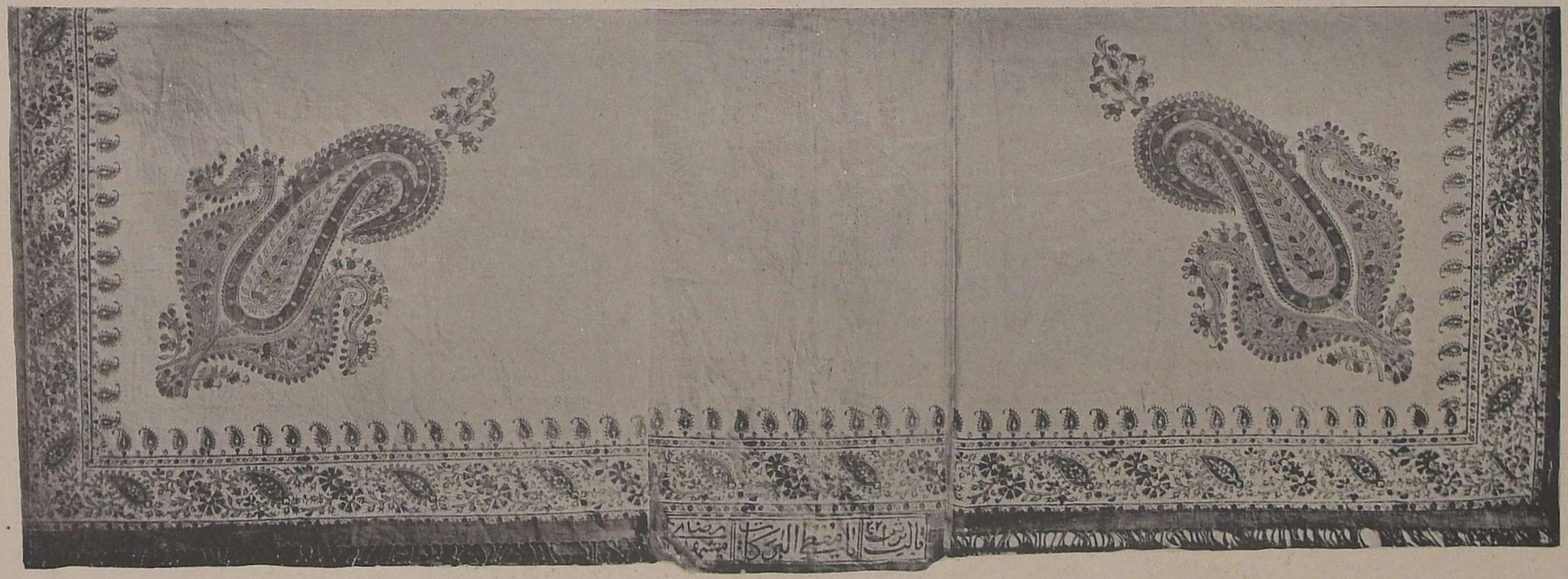


Fig. 32.

MASULIPATAM BED COVER.

Size 8' × 4' 6".
Ivory white cotton, red border at edge, pattern in fine black outline with red and blue.
Inscription in centre of lower border.
School of Arts Collection, Madras.

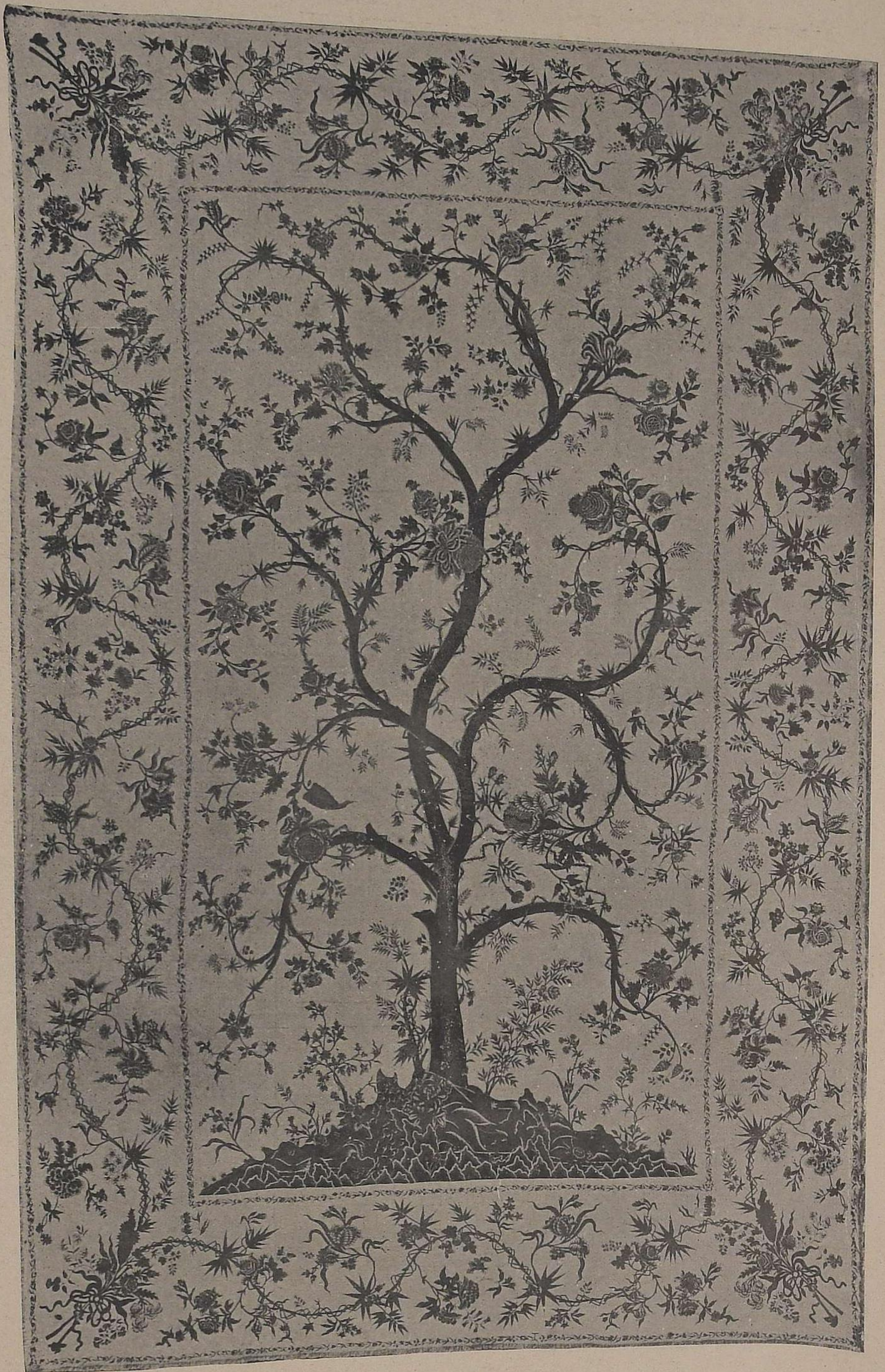


FIG. 33.

MASULIPATAM CURTAIN.

Size 12' × 7' 8".

Marked "VEIC" in lozenge on back.

This delicately treated tree pattern is much like the embroidered English linen hangings of the late seventeenth and early eighteenth century.

The treatment of the branches of the tree is fairly well balanced, and the contrast between the delicacy of the leaves and flowers, and the solidity of the branches and trunk, is very marked. This is a common characteristic of the embroidered linen hangings of similar pattern.

The colours are soft tones of brown, reds and greys.

India Museum Collection, London.

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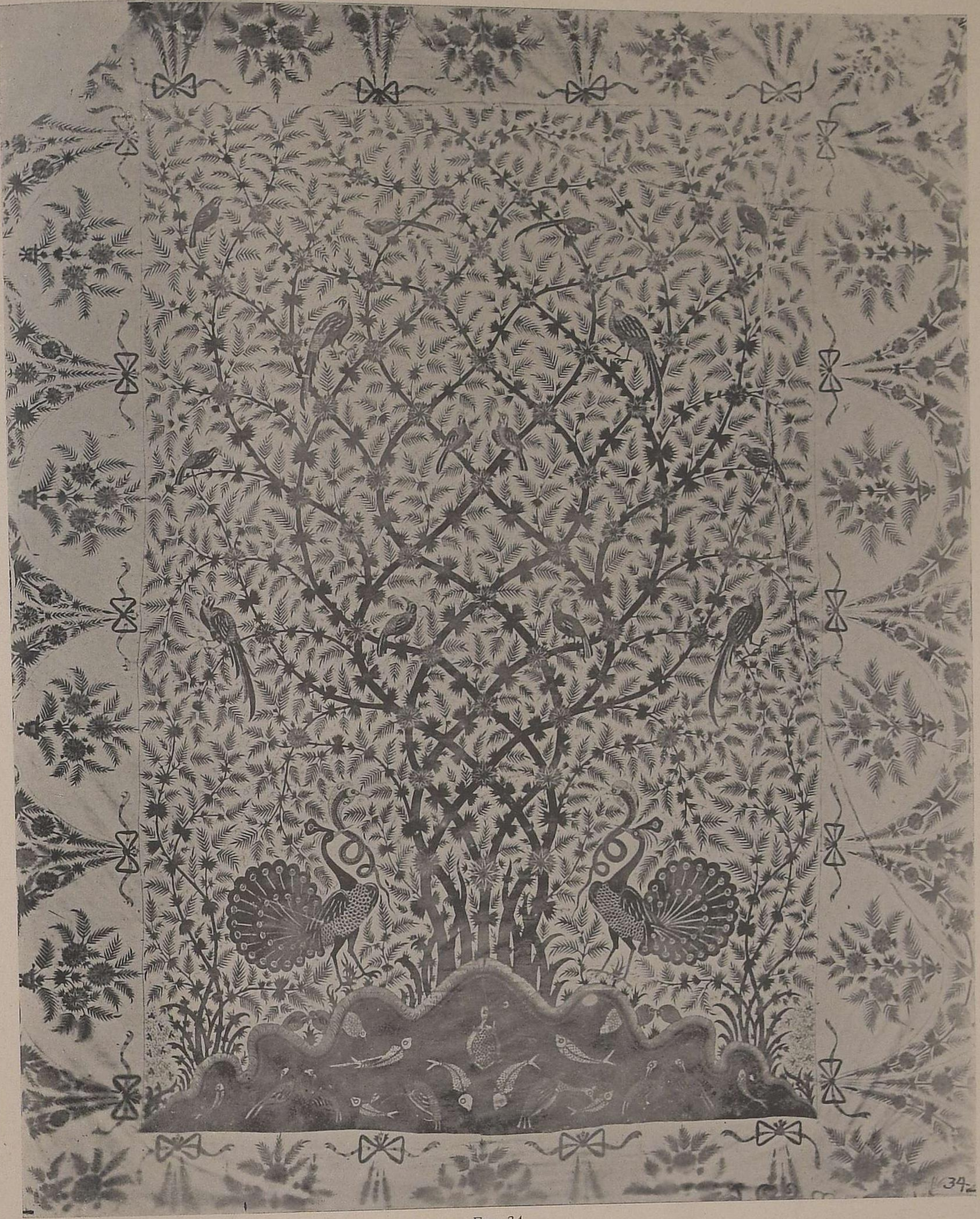

FIG. 34.

MASULIPATAM CURTAIN.

Size, centre portion, about 5' 6" × 8'.
The leaves are outlined in black and filled in with grey blue ; reds and browns are also used in the colouring.
The treatment of the tree is unusual and well arranged, but the spiky leaves are somewhat monotonous.
As in figures 35 and 50 the centre and border would both gain by more definite separation.
India Museum Collection, London.

Fig. 35.

SQUARE CURTAIN MADE IN ONE OF THE EAST INDIA COMPANY'S FACTORIES.

Size 10' × 10'. The colours are mostly in red and purples, the background, which is rather prominent in the photograph, is hardly perceptible in the cloth itself. The centre design is too suggestive of fireworks, but the border of swags is fairly well drawn. The pattern would gain by the centre being more definitely separated from the border. India Museum Collection, London.

Fig. 36.

MASULIPATAM BED COVER.

Size 6' × 9'.

This is a favourite pattern, with large mango forms at the ends. It is block printed, and the colours are mostly reds and blues, with black outlines.

Government Museum Collection, Madras.

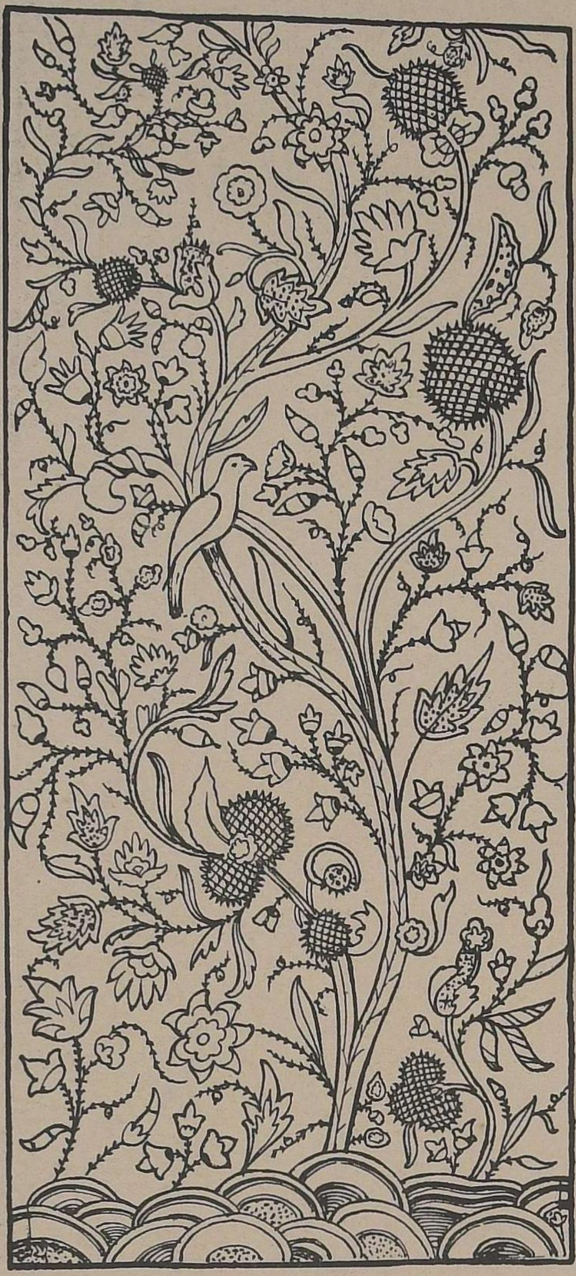

Fig. 37.

ENGLISH EMBROIDERY ON LINEN.

Early eighteenth century.

Fig. 38.

ENGLISH EMBROIDERED SCREEN PANEL.

Late seventeenth century.

FIG. 39.

ENGLISH SILK EMBROIDERY, EARLY EIGHTEENTH CENTURY.

Shows many forms borrowed from Indian decorated cottons.

Fig. 41.
MODERN PRINTED LINEN, FROM AN OLD JACOBEAN EMBROIDERY.

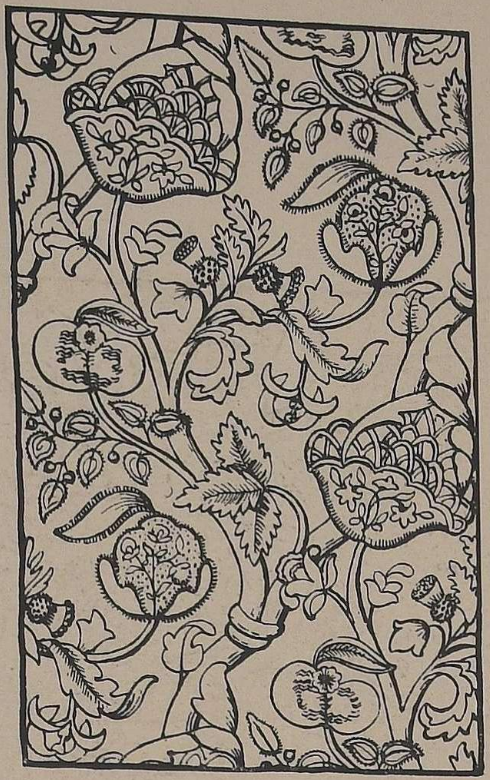

Fig. 40.
ENGLISH SEVENTEENTH CENTURY EMBROIDERY.

Fig. 42.
THE CENTRE PART OF PATTERN OF FIGURE 26 SHOWING THE SKILFUL ARRANGEMENT OF LINES AND SPOTS.

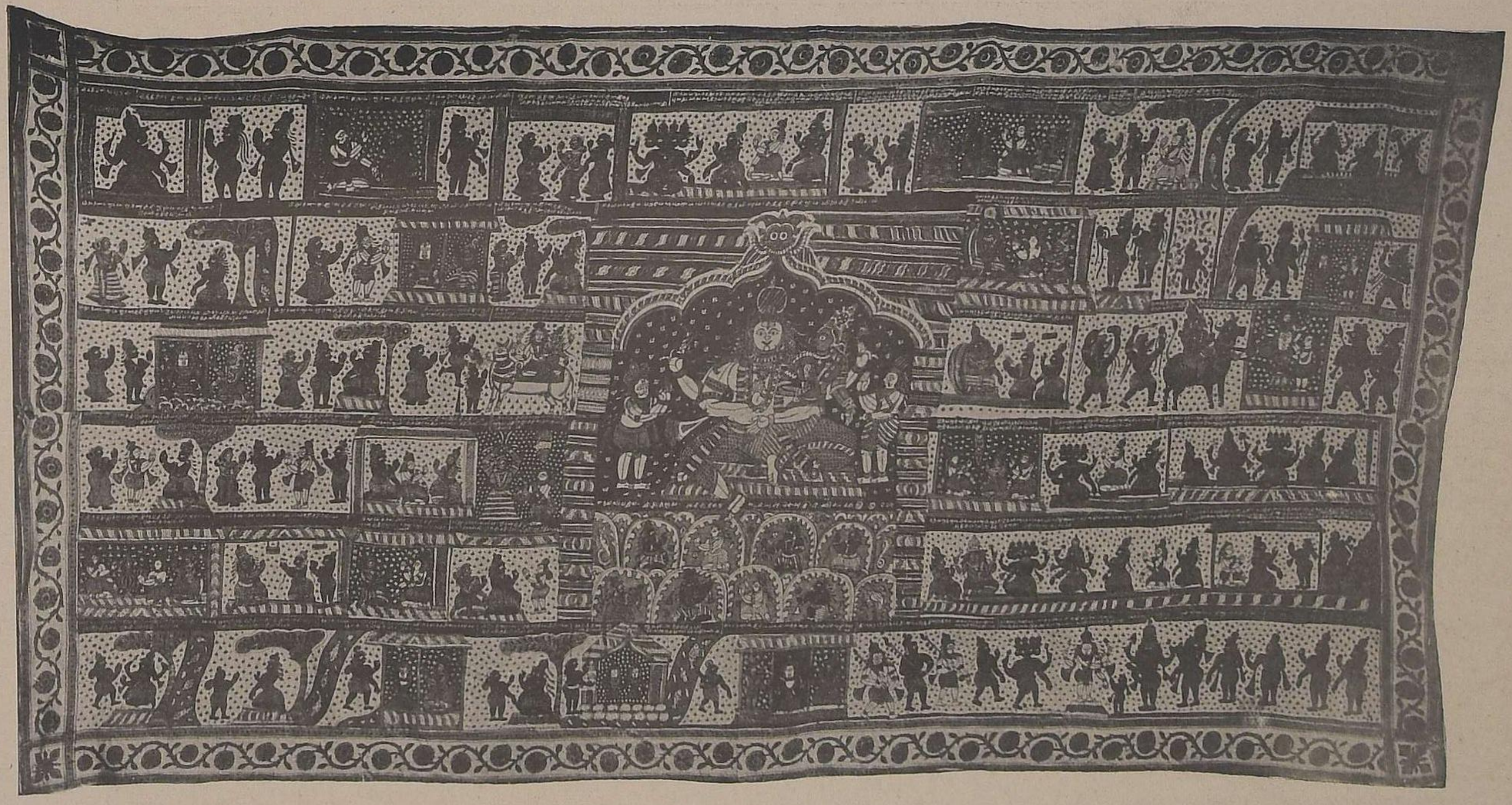

Fig. 43.

KALAHASTI SCREEN CLOTH, USED FOR DECORATION OF TEMPLE CARS.

Size 11' 3" × 6'.

These cloths are coloured, usually, with a predominance of red and black on a white ground.

Blue, yellow and green are also used in small quantities.

The scenes depicted are generally subjects from the Mahabharata or Ramayana.

While the drawing is invariably crude, the arrangement and colouring is often effective.

The scenes are generally easily identified by their simplicity of composition, but each incident is explained in Telugu as well, on the narrow borders separating the lines of figures.

Government Museum Collection, Madras.

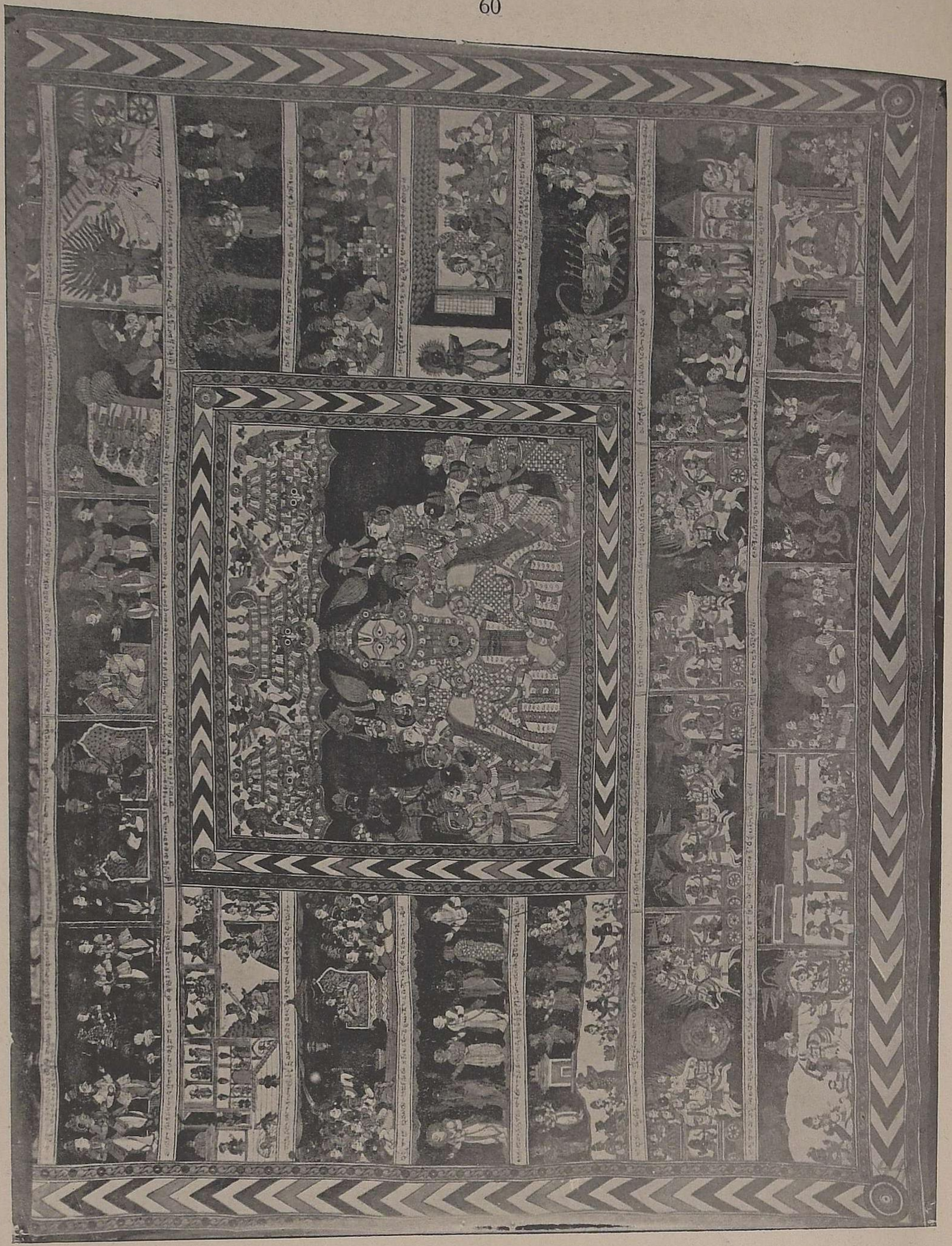

Fig. 44.

KALAHASTI SCREEN CLOTH.

The pattern is somewhat more carefully drawn, and the incidents depicted more complicated than in the example, figure 43.

The separation of the different scenes by the definite white lines adds to its decorative value.

Fig. 45.

KALAHASTI CURTAIN.

Size 11' 3" × 5' 8".

This is the most usual form of the conventional tree pattern.

At the base is represented a tank, with fishes, a turtle, and snakes ; above, the earth, with various animals, from this, trees filled with a variety of birds and animals, spring. There are well over a hundred birds and animals represented on the cloth.

The border of swags is the most usual one for this particular pattern.

The colours are red, blue, black, green and yellow.

Government Museum Collection, Madras.

FIG. 46.

KALAHASTI CURTAIN.

Size 9' 3" × 6'.

This is a variation of the tree pattern with much more stiffly treated forms than the one shown in figure 45. The colouring is more in one tone, and more red is used than in the other example, red and green being almost equal in amount. In the swag border, the evenly distributed ornament gives a great feeling of richness to the pattern.

Government Museum Collection, Madras.

FIG. 47.

MODERN PONNERI CLOTH DECORATED WITH SCENES FROM THE LIFE OF KRISHNA.

Size 5' 9" × 8' 6".

The upper band of the centre portion represents Krishna's parents tieing him to a tree.

The central part shows Krishna with Rukmani on the right and Satiabama on the left. Gandavas in the sky are pouring flowers on them.

The lower band has Saraswati in the centre, with her veena, and Kama Denu, the sacred cow, on each side.

The type of cloth is somewhat similar to those of Kalahasti, but the colouring is in shades of red and blue, with a dark red background, and considerable quantities of green and yellow.

School of Arts Collection, Madras.

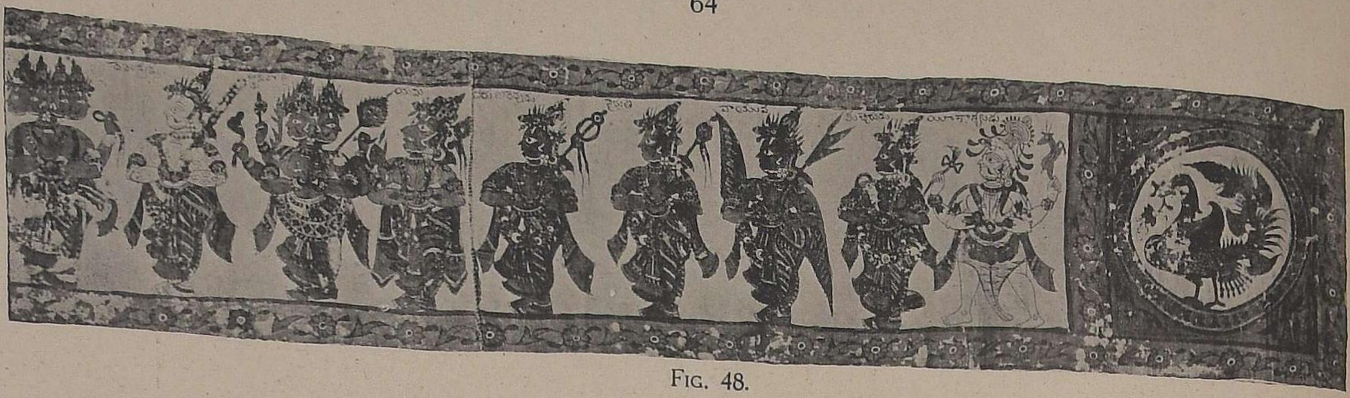

FIG. 48.

A STRIP FROM A PALAKOLLU CLOTH.

Size 12" wide × 4' 4" long.

Colours : blue, black, red, yellow, green and mauves.

The figures are of various deities, regents of the eight cardinal points, from left to right : Brahma (with four faces), Indra (King of Devas, and regent of the east), Agni (God of fire, and regent of the south-east), Yama (God of death, and regent of the south), Varuna (God of rain, and regent of the west), Niruti (regent of the south-west), Vayuva (God of wind, and regent of the north-west), Kuvera (God of riches, and regent of the north) and Isania (regent of the north-east).

School of Arts Collection, Madras.

FIG. 49.

THREE STRIPS FROM A PALAKOLLU CLOTH.

Size 7 inches to 8 inches wide ; 3 feet 6 inches long.

Colours : black outlines, reds, greens, blûes, yellows and mauves.

In the upper row beginning at the left are represented : Sisupala, Gauri (a name of Parvati), Rukmani (worshipping Gauri), Rukmani and Krishna, and the last three figures, Krishna carrying Rukmani in a chariot to Dwaraka.

In the second row : Balarama fighting with Chanura, Krishna fighting with Mushtika, Vasudeva and Devaki (reputed father and mother of Krishna) being imprisoned by Kamsa (maternal uncle of Krishna).

In the third row : Krishna playing the flute is the fourth figure, and the three on each side of him are gopis. The last three figures are Krishna fighting with a giant, and an on-looker.

Fig. 50.

PALAKOLLU CURTAIN.

Size 5' 6" × 5' 9".

The workmanship is of a different character from any of the other examples. The design is freer and less conventional, and the colouring, which is all in soft tones, of red and blue, is enhanced by the use of gold leaf outline.

Government Museum Collection, Madras.

FIG. 51.

TABLE COVER MADE AT JAMMALAMADUGU.

The colours are red and black, and the cloth is entirely printed with blocks.

Fig. 52.

BED COVER MADE IN MADRAS.

The colours are red, blue, yellow and green. The cloth is done entirely by hand, no blocks being used.

Fig. 53.
A CURTAIN OR CANOPY PROBABLY MADE AT PALAKOLLU.

Size 3' × 6' 9".

An excellent example of a cloth decorated with Hindu religious subjects.

The centre circle, in the top half, represents Krishna with his eight consorts. The bottom half has the sacred fire "Omakundam" in the middle, with musicians playing the veena and thumboor at either side.

In the corners are: A, the ocean of milk being churned by Devas and Asuras, five on each side, with the hill "Mahalachala" which served as a churn stick, and "Sesha" the serpent as a rope.

In the corner of this compartment, next the centre, is Narayana on Garuda.

B represents Sri Krishna on the "Punna" tree with the clothes of the gopis who were bathing in the tank, the gopis imploring that their clothes might be restored.

C, Sri Krishna lifting the hill "Govarthana" as an umbrella, in order to protect the people from incessant thunder and rain, sent down by Indra and Varuna; Indra on his elephant, and Varuna on a crocodile, are represented on the hill.

D, Sri Krishna in his youth, dancing on the serpent "Kalinga."

The colouring of this cloth is mostly in reds and blues with a fine outline probably once black.

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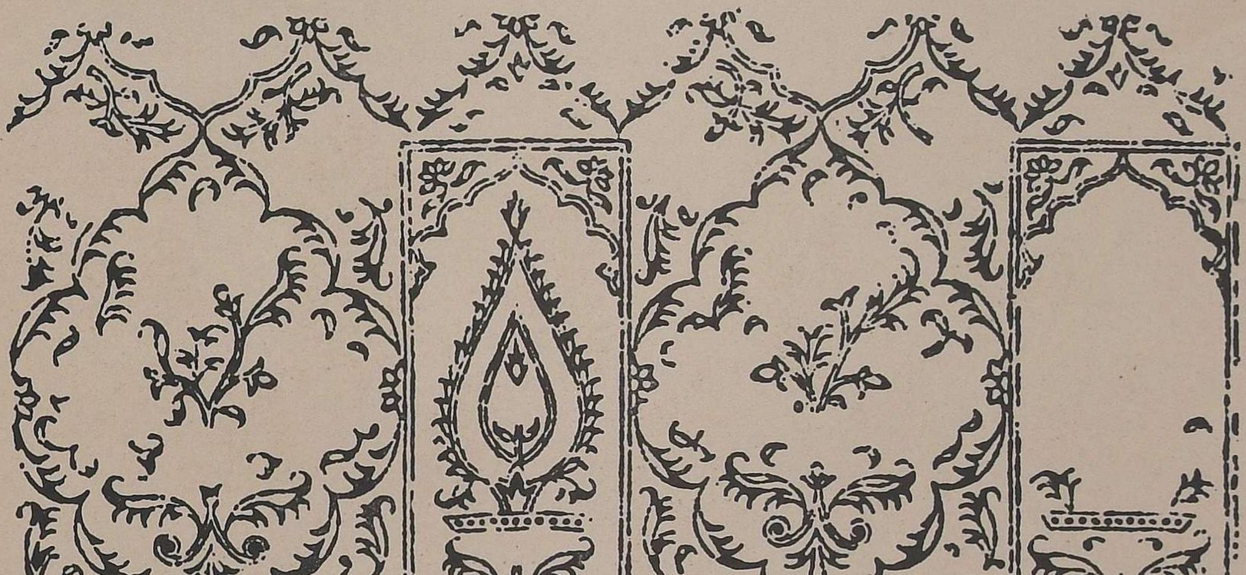
Fig. 54-A.
PRINTS FROM MASULIPATAM WOOD BLOCKS.



Figs. 54-B and C.

PRINTS FROM MASULIPATAM WOOD BLOCKS.

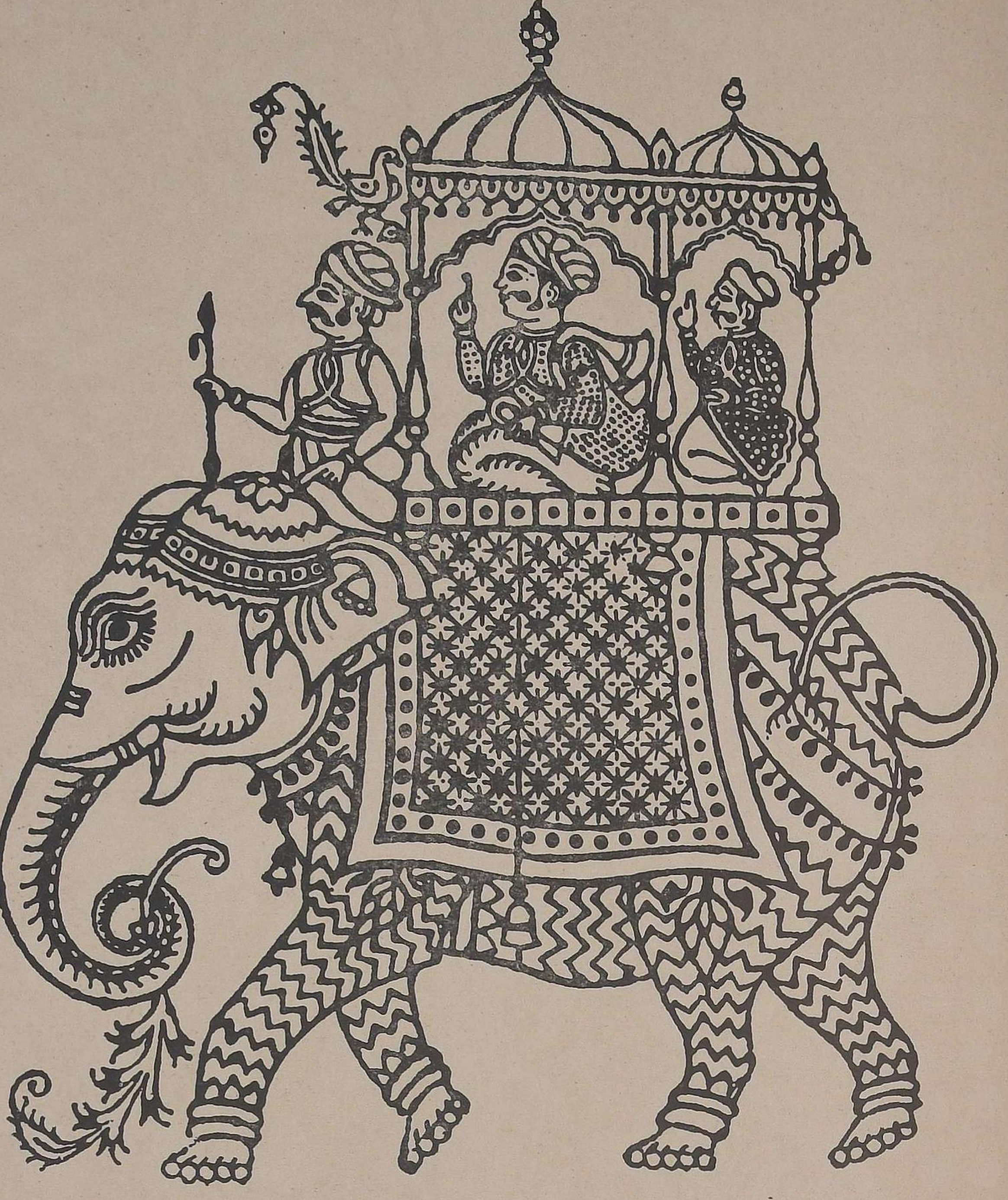


FIG. 55.

A FINE EXAMPLE OF A LATE MASULIPATAM WOOD BLOCK.

These were used to form borders across the base of certain patterns. Such elaborately drawn animals are not found in early Masulipatam cloths.

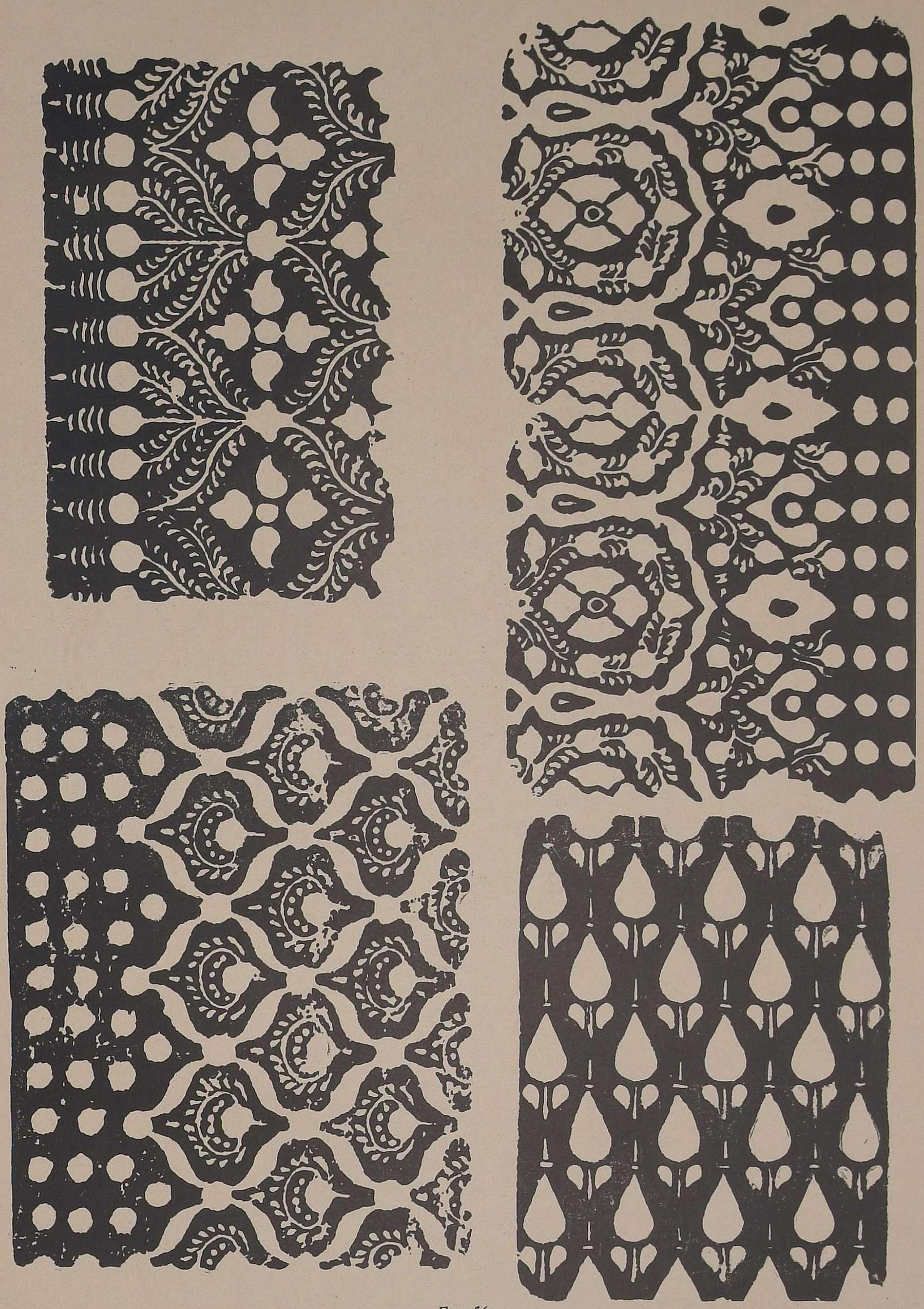
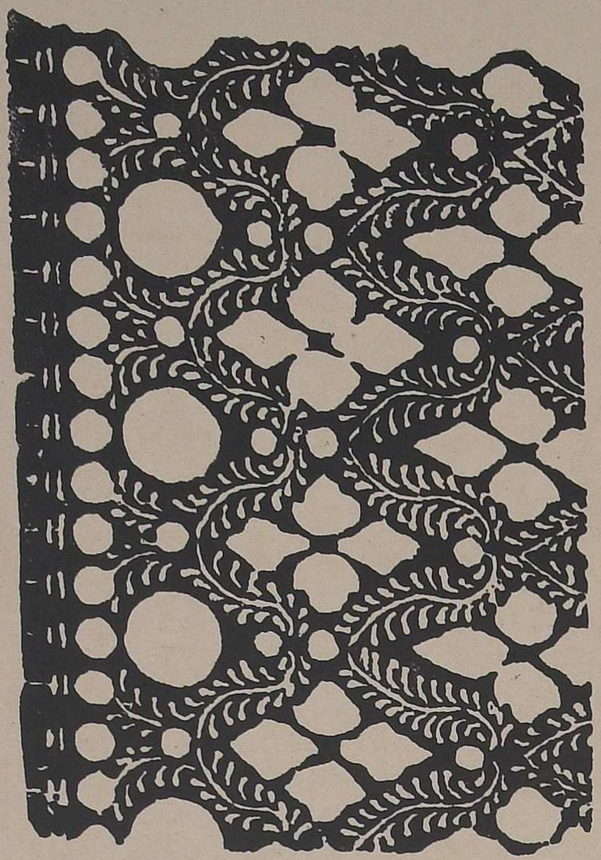


Fig. 56.

PRINTS FROM KUMBAKONAM WOOD BLOCKS USED FOR WAX.

The block in the lower right-hand corner is for a repeating pattern, filling the centre of the cloth, the other ones for parts of borders.



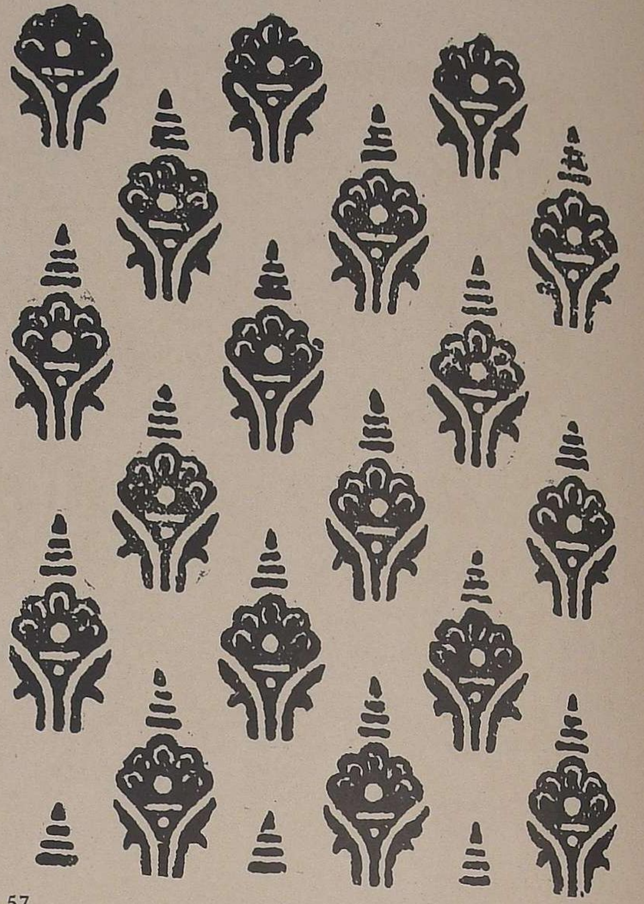


Fig. 57.

PRINTS FROM KUMBAKONAM WOOD BLOCKS.

The right-hand block was probably used for picking out a white pattern on a mordanted ground. The left-hand block for wax.

Fig. 57.

TWO PRINTS FROM A KUMBAKONAM WOOD BLOCK USED FOR WAX.

Fig. 58.

TWO PRINTS FROM A KUMBAKONAM WOOD BLOCK USED FOR WAX.

Fig. 58.

TWO PRINTS FROM A KUMBAKONAM WOOD BLOCK USED FOR WAX.

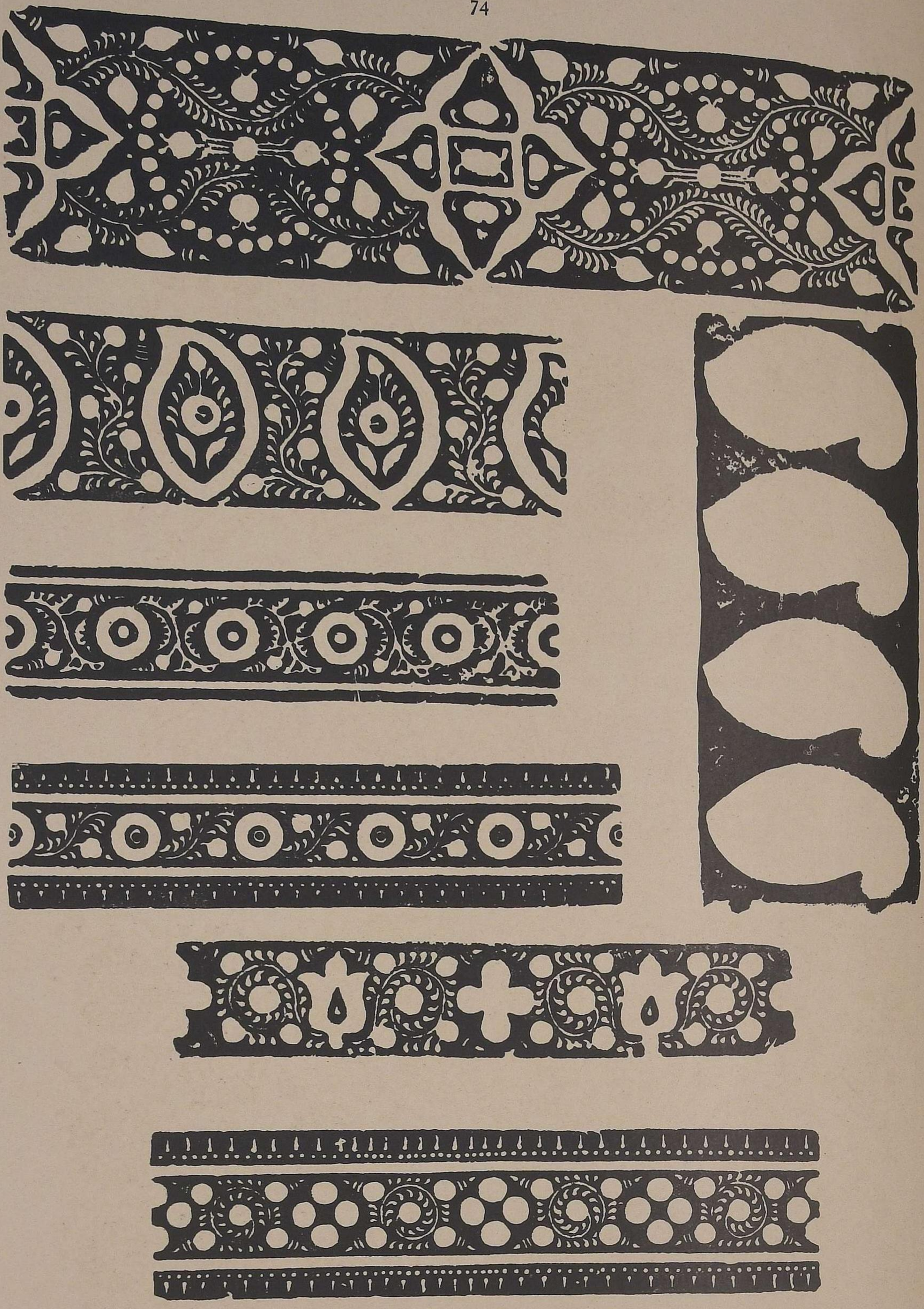


FIG. 59.

PRINTS FROM: KUMBAKONAM WOOD BLOCKS.

FIG. 60.

PRINTS FROM PONNERI WOOD BLOCKS.

Fig. 61.
TWO PRINTS FROM A PONNERI WOOD BLOCK.

Fig. 62.
SMALL REPEATING PATTERNS.
Origin not known.

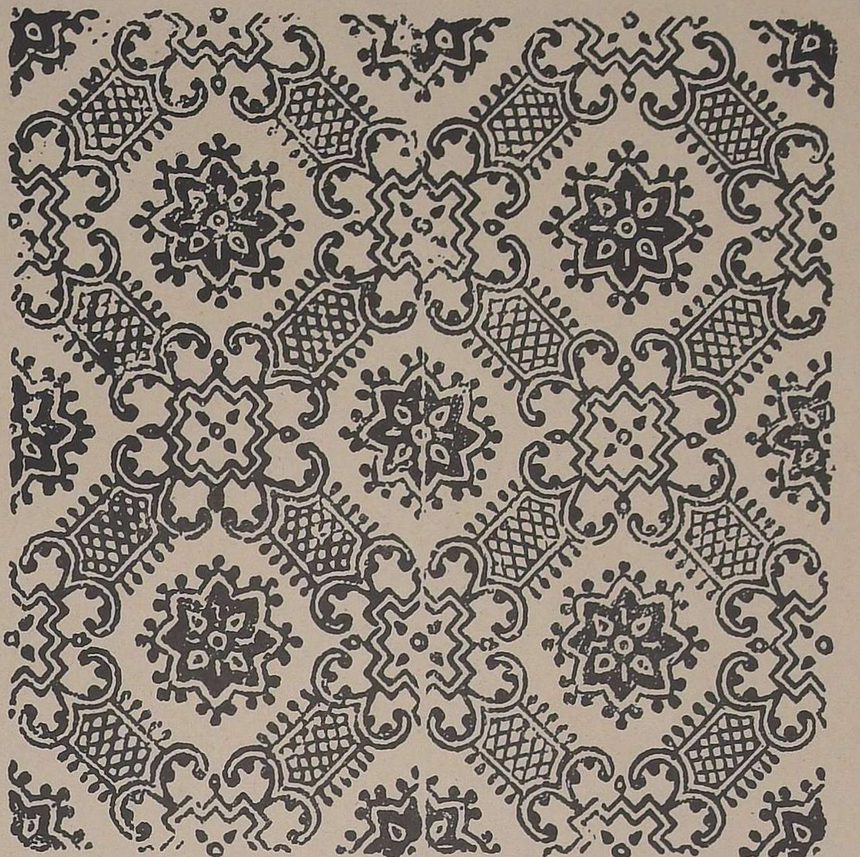


FIG. 63.
PRINTS FROM PONNERI WOOD BLOCKS.

Fig. 64.

FOUR PRINTS FROM A PONNERI WOOD BLOCK, SHOWING REPEAT.

Full size.

Fig. 65.

TWO PRINTS FROM A PONNERI WOOD BLOCK.

Fig. 66.

PRINTS FROM PONNERI WOOD BLOCK, SHOWING REPEAT.

The imperfect joining at the edges is partly due to wear of the block.

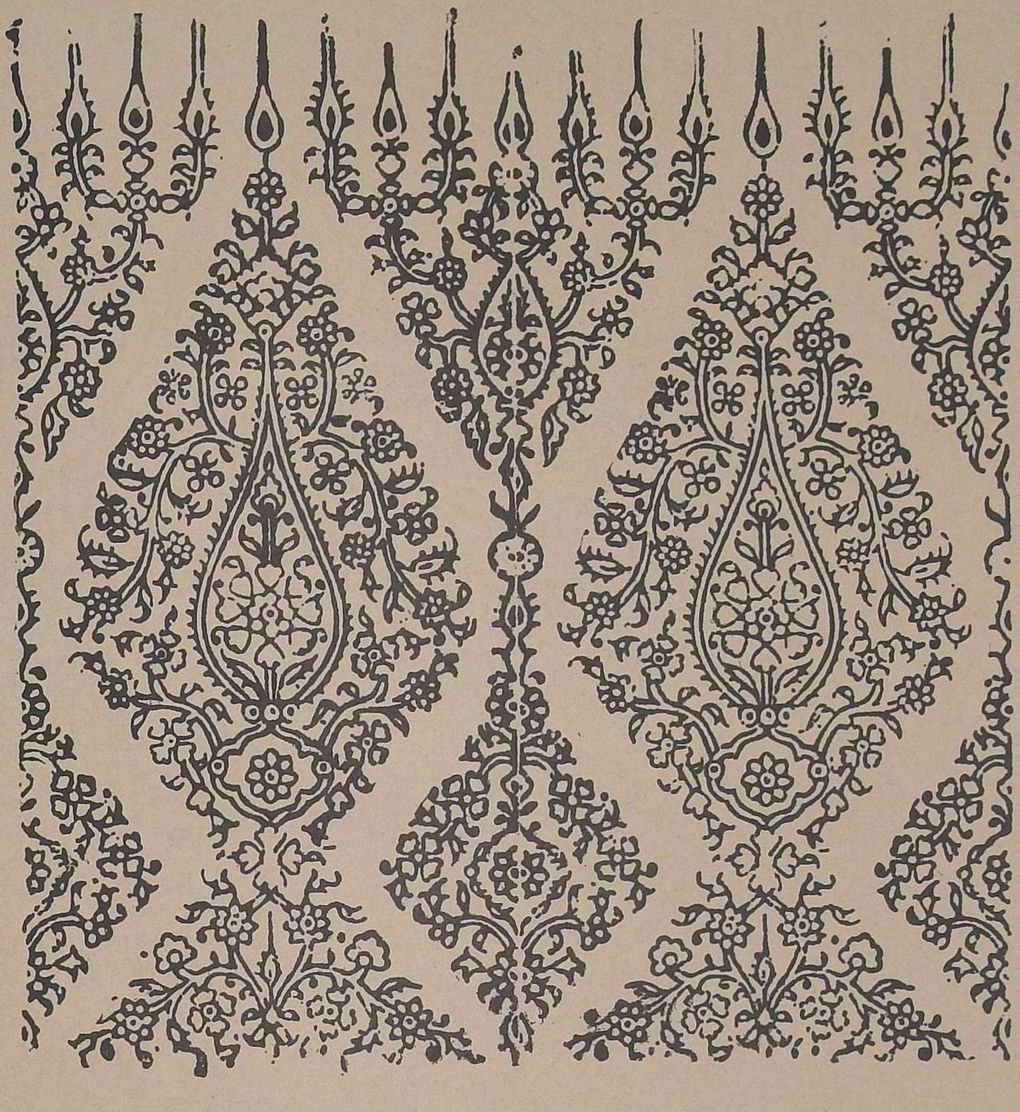


FIG. 67.

TWO PRINTS FROM A MASULIPATAM WOOD BLOCK.

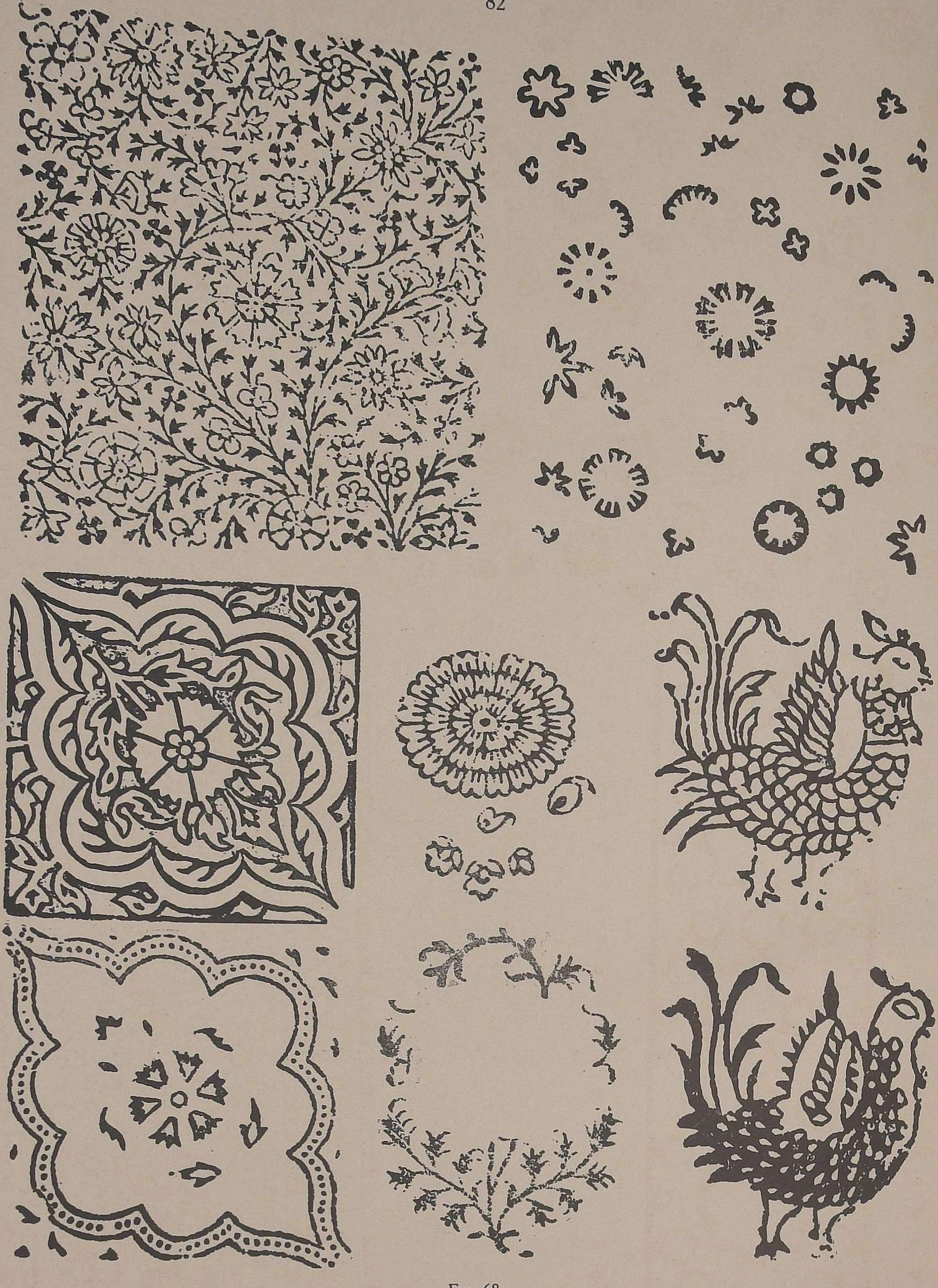


Fig. 68.

PRINTS FROM FOUR SETS OF TWO WOOD BLOCKS, SHOWING THE BLOCKS USED FOR OUTLINE AND FOR FILLING.

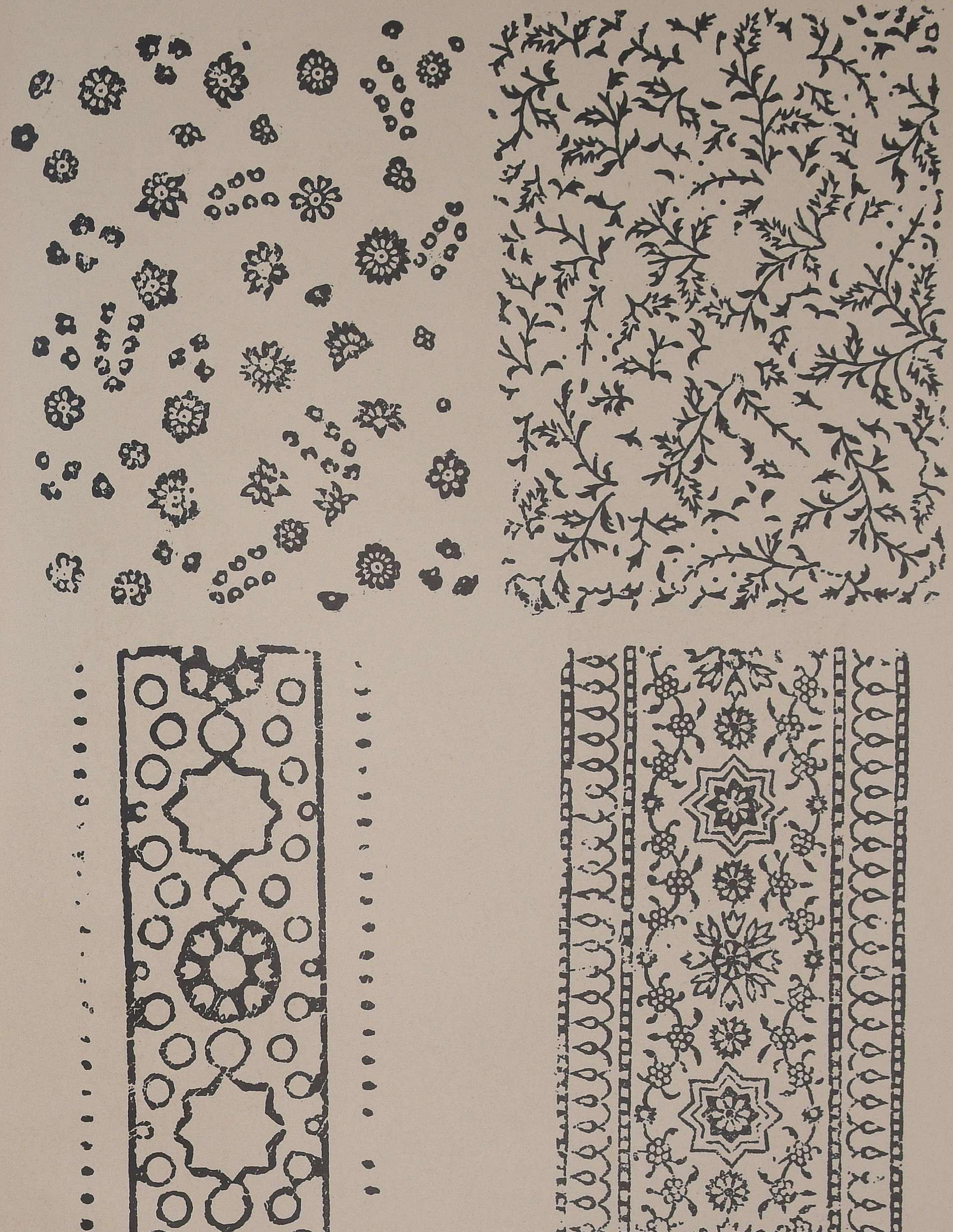


Fig. 69.
PRINTS FROM TWO SETS OF WOOD BLOCKS. EACH SET FORMING ONE PATTERN.

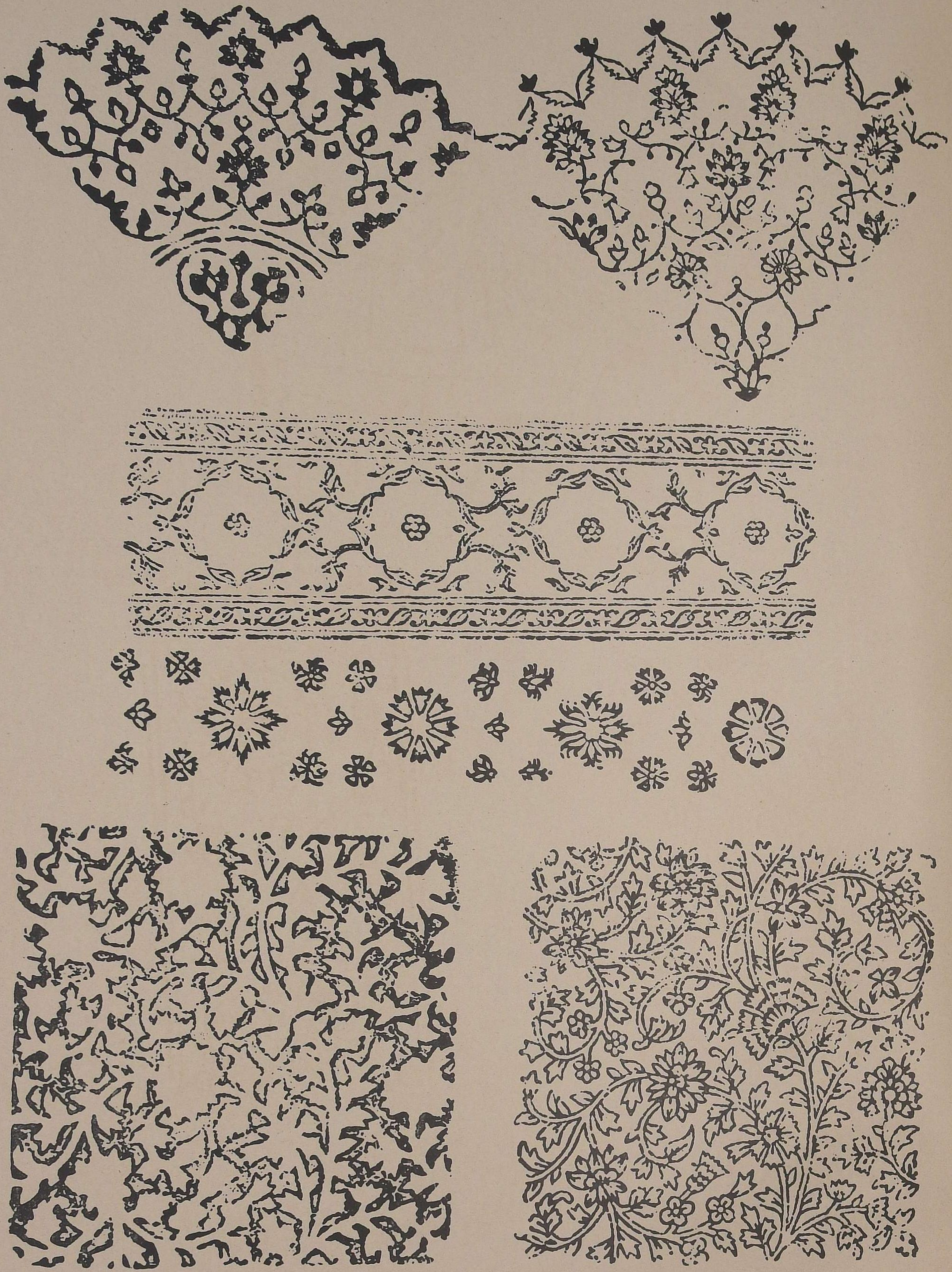


Fig. 70.

PRINTS FROM THREE SETS OF TWO WOOD BLOCKS. EACH SET FORMING ONE PATTERN.

Fig. 71.

PRINTS FROM WOOD BLOCKS.

The upper example shows one of the very crude blocks used at Wallajah.

Fig. 72.

PRINTS FROM TWO SETS OF WOOD BLOCKS FROM WALLAJAH.

The two blocks forming one pattern.

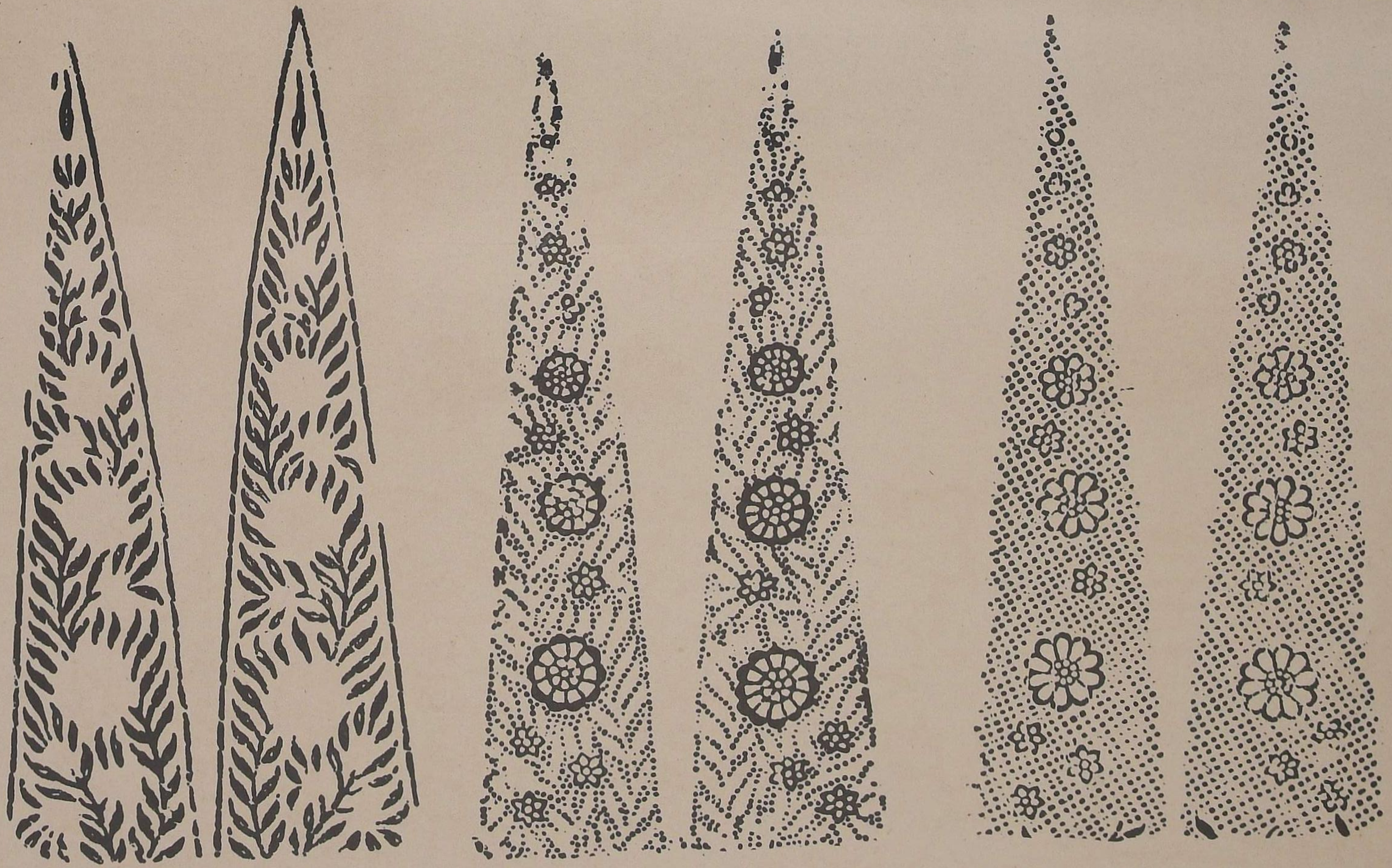


Fig. 73.

PRINTS FROM THREE PONNERI WOOD BLOCKS TO FORM ONE PATTERN.

This was a favourite pattern for finishing a border and much used in Ponneri cloths.

Fig. 74.

PRINTS FROM WALLAJAH BLOCKS MADE WITH WIRE.

Fig. 75.

"MANGO" PATTERN WOOD BLOCK.

Origin not known.

FIG. 76.
PRINTS FROM WOOD BLOCKS USED FOR BORDERS.

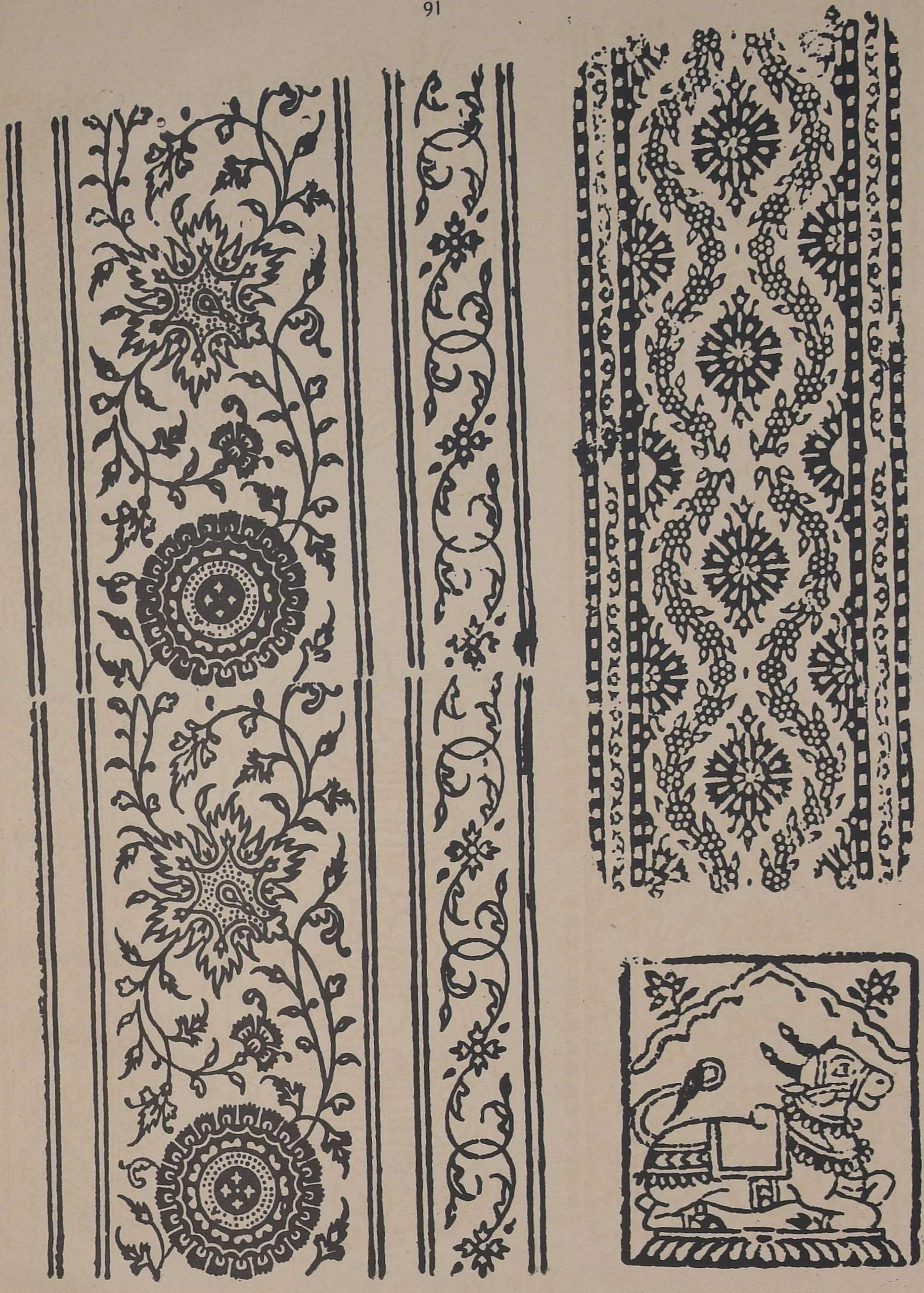


Fig. 77.
PRINTS FROM WOOD BLOCKS USED FOR BORDERS.

Fig. 78.
VARIETIES OF THE "MANGO" PATTERN FROM DIFFERENT SOURCES.

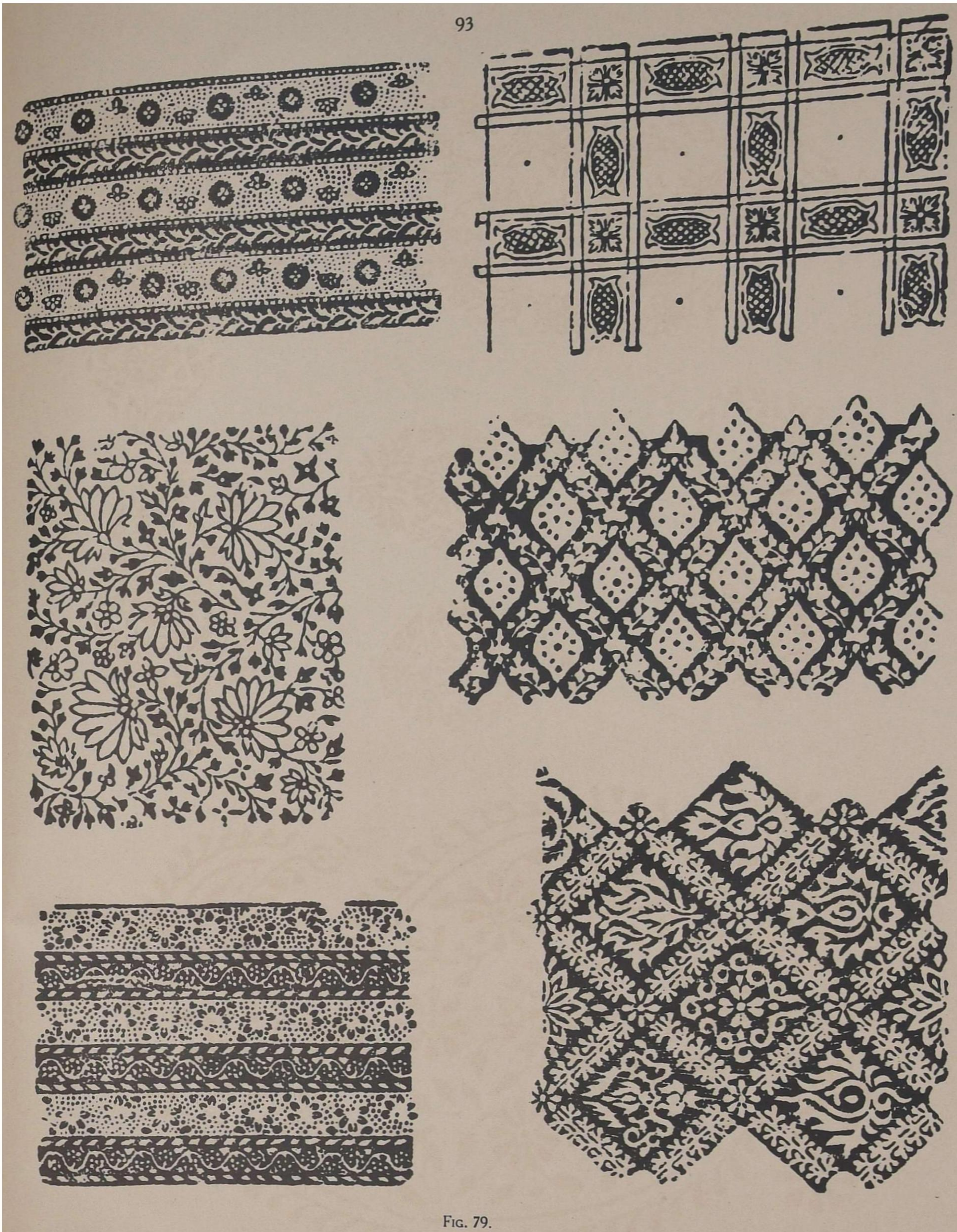


Fig. 79.

PRINTS FROM BLOCKS FOR SMALL REPEATING PATTERNS.

The upper right-hand corner example is from Ponneri. The origin of the others is not known.